J. Galen Saylor • William M. Alexander

Curriculum Planning

for Modern Schools

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Preface

In the decade since we wrote our previous book on the school curriculum, *Curriculum Planning for Better Teaching and Learning,* important changes have occurred in the program of common school education in the United States. Undoubtedly the past ten years has been one of the most significant periods of educational development in our history. And educational developments will continue in the years ahead, probably with even increased tempo of change and modification in the schooling provided pupils. This book is our effort to analyze the processes of curriculum planning, to define the basic elements that should constitute the determinants of an educational program, and to describe the principles and procedures that should guide the direction and nature of change in the curriculum of the American elementary and secondary school in the future. Throughout the book we have sought to develop a theoretical base for making curriculum decisions.

We believe that the same fundamental principles that have evolved in practice for the past half century or more, and have proved to be valid for achieving the ends envisioned for schooling in our democratic nation, remain inviolate for curriculum planning now and in the years ahead. We have endeavored to state and define these principles. The data to be taken into account in planning have changed, in some instances radically, and new emphasis needs to be given to certain data sources, but the processes of planning and the fundamental factors to be considered remain much the same as those that have determined the curriculum for a number of decades.

In fact, much of the dialogue, as well as the differences in ways of viewing the curriculum, are disagreements on the relative importance of each of the basic curriculum determinants, rather than rejections of any one factor. We have defined these factors, so that all may start the discussions on common grounds; we state overtly or imply throughout the book our beliefs, but encourage the reader to formulate his own theory of curriculum and instruction.

The titles of the five parts of the book represent our analysis in broad outline of the theory and practice of curriculum planning:

Part 1—The Process of Curriculum Planning
Part 2—The Determinants of the Curriculum
Part 3—The Bases for Curriculum Planning
Part 4—Organization of the Curriculum and Instruction
Part 5—Procedures of Curriculum Planning

Part 1 presents in a single chapter a theory of the process of curriculum planning. A model is used to identify the elements to be considered in the formulation of plans for schooling and the ways in which these factors are interrelated. A second model lists the persons and agencies who make curriculum decisions and the interdependency of these agents of curriculum planning.

Part 2 devotes a chapter to each of the two primodal determinants of the curriculum—the pupils who are to be schooled, and the social values, aims, beliefs, and expectations to be served by the schools established by the society for the education of the young.

Part 3 moves the process of curriculum development to the next logical step—the formulation of bases for selecting and organizing the content of the curriculum. The aims and functions of the school must be defined; the elements, designated as modes, focal points, strands, or similar centers that constitute the basis for selecting and then organizing the content of the curriculum, must be selected for each of the areas or fields to be included in the school program; the psychological principles that should guide educators in selecting the learning opportunities to be provided particular groups of pupils and the individuals comprising the group and for guiding the development of these experiences should be stated; and, finally, the curriculum worker should overtly define the criteria by which he will judge the merits of a total educational program or any part of it.

In Part 4, methods of organizing curriculum content and instruction are presented. First, attention is given to the development of plans for the total curriculum of the school and to various methods used to organize subject matter for instructional purposes. We then analyze new developments in various subject fields. Many curriculum projects and programs of national significance are described and new trends are summarized. Chapter 10 discusses new trends and developments in instructional organization and describes ways in which the schools are endeavoring to provide a better program of education for pupils. This section concludes in Chapter 11 with a comprehensive analysis of ways in which the school can individualize the curriculum on the basis of pupil capabilities and needs.

Part 5 considers the roles and responsibilities of various persons and agencies in the process of curriculum planning. Primary responsibility devolves, of course, on the teacher, the staff of the individual school, and the total staff personnel—administrative, supervisory, and consultative—of the school system itself.

We gratefully acknowledge the important and significant part which many individuals have had in the refinement, reformulation, and redefinition of our concepts and understanding of the theory and practice of curriculum development. Foremost, we are grateful to Hollis L. Caswell, who as one of the great leaders of the curriculum field in this country, shaped our points of view and developed our understandings while we both enjoyed the privilege of being his student and advisee. Secondly, we express a debt to many teachers, curriculum directors, principals and superintendents of school systems, professors of curriculum in colleges of education, scholars in subject areas, and associates in professional organizations for a refinement and extension of our concepts of curriculum planning. Thirdly, our many students, both at the undergraduate and graduate levels, have stimulated us to evaluate, clarify, and redefine the principles that characterize curriculum planning in our nation's schools.

J.G.S.
W.M.A.

Lincoln, Nebraska
Gainesville, Florida
November 1965

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PART 1

THE PROCESS OF CURRICULUM PLANNING

CHAPTER 1

The Theory and Process of Curriculum Planning

Excellence in the program of any social institution reflects the quality of program planning. Education is no exception: the quality of individual school programs varies quite directly with the quality of program planning. Indeed, the programs of individual classrooms and of individual students usually mirror distinctly the nature and extent of the planning of these programs by teachers and students. Good plans may not guarantee good programs, but programs are rarely if ever good by accident. This book is concerned with principles and procedures of good program planning in education—that is, curriculum planning—and this first chapter presents our beliefs as to the necessity and nature of a deliberate and comprehensive process of curriculum planning.

A THEORY OF CURRICULUM PLANNING

Curriculum planning is a complex undertaking. Its complexity and difficulty are perhaps heightened by the usual absence of a set of clear and consistent beliefs as to the why and how of planning, that is, a theory of curriculum planning.[1] As a basis for the full development of our own formulations throughout this book, we offer in this section a brief set of statements explaining our position.

Some Assumptions

We believe that program planning in American education is of very great importance because of certain underlying characteristics of the American educational system and their implications. Thus, we make these assumptions:

1. *Quality in the educational program has priority in American educational goals.* In Chapter 3 we develop the point that the ideals to which our nation seems dedicated place great emphasis on steady and significant improvement in the curriculum. As we see it, excellence in education cannot be subordinated to other goals and considerations but must override many efforts to bring about the full realization of the potentialities of each American and American civilization as a whole. Hence planning of the educational program cannot be undertaken on

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[1] George A. Beauchamp, *Curriculum Theory* (Wilmette, Ill.: The Kaag Press, 1961), pp. 1–3.

piecemeal and spasmodic bases with only short-term and halfway goals, but must be a major, deliberate effort to achieve such excellence.

2. *The curriculum itself must be dynamic and ever changing as new developments and needs in our society arise.* Attention is given in Chapter 3 to the demands on education made by a changing society, and in Chapter 5 to those made by the changes in organized knowledge. We cannot assume that a curriculum content adequate and comprehensive in one period of time will suffice in another. Indeed, we would hesitate to place a definite time of expected obsolescence on any body of organized knowledge, but would instead seek continuing studies that would substitute new for old content as rapidly and continuously as possible.

3. *The process of curriculum planning must be continuous.* This assumption follows from the second: a dynamic curriculum cannot be planned every few years with no changes made in the interim between planning efforts. Although curriculum planning includes the development of courses of study and other curriculum guides, it is not properly limited to occasional production of such materials.

4. *No master curriculum plan will serve all schools.* Attention is given later in this chapter to the issue of centralized curriculum planning. We believe that the American educational system, with its past decentralization and lack of national control will be greatly improved in structure and operation. But we do not see as either desirable or likely the abandonment of state and local control in curriculum matters. Many national efforts to improve the curriculum are needed, but these should not and will not, we think, lead to a single curriculum plan for any level or area that all schools will follow.

5. *Many individuals participate in curriculum planning.* The variety of plans in different states and localities necessarily involves many planners. Furthermore, we recognize the contributions made in planning by the many individuals and groups identified in this chapter. Curriculum planning is not the sole prerogative of curriculum directors, nor of scholars in the subject fields, nor of classroom teachers, nor of any other one group of educators or citizens.

6. *Procedures of curriculum planning vary from system to system, from school to school, and from classroom to classroom, but they are logical, consistent, and identifiable in each situation.* Our other assumptions should point to this last one, for we cannot justify in their light any formula of a "best" pattern of curriculum planning procedures. No one type of committee or council organization, no one method of curriculum research, no one plan of resource unit development could be universally acceptable in schools which seek an excellent curriculum, changing as needed, serving each particular situation, and involving in its development people locally concerned. At the same type, we assume that the particular pattern of planning followed in the individual system, school, or classroom will be one that is clearly related to local resources and

consistent in its progression from ideas to action. Furthermore, the pattern followed should be one that can be explained and demonstrated to indicate to those who are concerned the steps taken in making curriculum decisions and arriving at curriculum plans.

Definition of Terms

Some terms frequently used in this chapter and others and to which we attach particular meanings are curriculum, curriculum plan, curriculum planning, and curriculum guide. We define these as follows:

Curriculum encompasses all learning opportunities provided by the school. Thus we think of "the curriculum" and "the program" of the school as synonymous. In another sense, the curriculum of an individual pupil includes the learning opportunities he actually selects and experiences; this is the "curriculum had." Although all curriculum planners aim to provide a "curriculum planned" which would be of optimum value to learners, they generally provide a much greater range of opportunities than any one individual pupil would select and experience. It is this total planned program and the fit of its individual parts to each other and to individual pupils with which we are primarily concerned.

A curriculum plan is the advance arrangement of learning opportunities for a particular population of learners. Generally when we speak of the curriculum of a particular school system we are really referring to the plan for the pupil population as a whole. "The curriculum," more precisely, is the total series of learning opportunities provided by a particular school for its own student body. Those who plan this curriculum are guided by the curriculum plan of the system, and the plan they develop for the school in turn gives guidance to groups of teachers and individual teachers in making arrangements of learning opportunities for the particular learners they teach. Thus there may be a curriculum plan for the system, for the school, for the grade level or subject department or other classification of instructional groups, for each class or other learning group, and even for each learner.

Curriculum planning is the process whereby these arrangements of learning opportunities or curriculum plans are created. Curriculum planning is occurring as lay and professional committees reach decisions as to new instructional programs to be added or old ones to be dropped or modified in the schools of a particular state or local school district. It is also occurring as school faculties plan to fit new programs into existing ones, and as the teachers responsible work together and individually to arrange specific learning opportunities for the pupil they teach. Its most frequent occurrence is in the work teachers do in preparing for their duties of teaching—deciding upon goals and emphases, determining curriculum content, selecting learning resources, and classroom procedures, evaluating progress, and looking toward next steps. Wherever it occurs, and by whomever it is done, curriculum planning is essentially a process of making decisions about the curriculum.

A curriculum guide is a written curriculum plan. The term "curriculum guide" is used to describe many types of written materials designed to give guidance to teachers and others in the final development of the curriculum in learning situations: statements of curriculum scope and sequence; courses of study for various levels and subjects; resource units, including materials relating to units of work to be developed in different learning situations; suggestions as to teaching practices; and various kinds of bulletins used by study groups in organized curriculum study undertakings. Guides to be used by numbers of teachers are usually made available by the school or system in printed or mimeographed form, although many types of syllabi, reading lists, worksheets for pupils, and other materials may be prepared by individual teachers and perhaps shared with others.

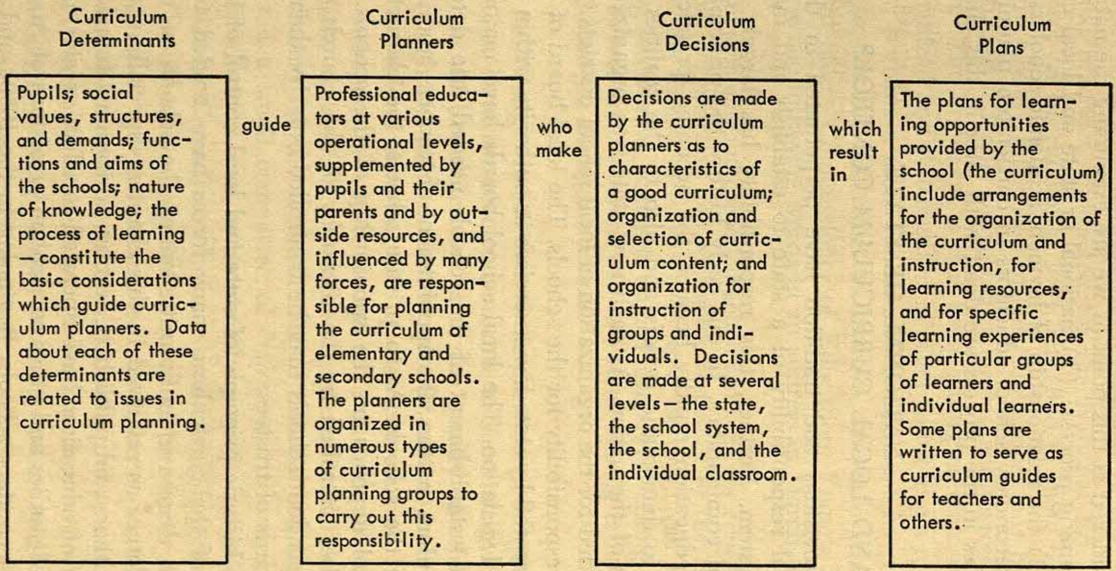
Additional ideas and illustrations relating to each of these terms will be presented at appropriate points in this chapter and later.

The Process: A Model

Figure 1 summarizes in chart form our theory of the process of curriculum planning. This model may also be referred to for explanation of the arrangement of this book. In this chapter we deal with the question of who the curriculum planners are and the forces and resources which influence them, and with the nature of curriculum decisions and plans. In Parts 2 and 3 we give extended consideration to the determinants and bases of the curriculum by which the curriculum planning process is logically guided. Parts 4 and 5 treat in detail specific curriculum decisions and plans: Part 4 is especially concerned with the organization of the curriculum, and Part 5 with the procedures of curriculum planning employed at various levels and for different purposes.

WHO PLANS THE CURRICULUM?

Although the actual arrangement of learning opportunities for a particular school population must be and is planned by those responsible for the education of this population, it must be recognized that the content of these opportunities may have been largely determined outside the local situation. True, under our American governmental system, the individual states are responsible for their respective systems of public education, and the states to varying degrees delegate these responsibilities to local boards of education, which in turn refer to the professional staff such professional decisions as those of curriculum and instruction. But in the process of making decisions the states, the boards, and the staffs may adopt in their entirety plans made elsewhere, adapt these plans to



Curriculum Determinants

Pupils; social values, structures, and demands; functions and aims of the schools; nature of knowledge; the process of learning — constitute the basic considerations which guide curriculum planners. Data about each of these determinants are related to issues in curriculum planning.

guide

Curriculum Planners

Professional educators at various operational levels, supplemented by pupils and their parents and by outside resources, and influenced by many forces, are responsible for planning the curriculum of elementary and secondary schools. The planners are organized in numerous types of curriculum planning groups to carry out this responsibility.

who make

Curriculum Decisions

Decisions are made by the curriculum planners as to characteristics of a good curriculum; organization and selection of curriculum content; and organization for instruction of groups and individuals. Decisions are made at several levels — the state, the school system, the school, and the individual classroom.

which result in

Curriculum Plans

The plans for learning opportunities provided by the school (the curriculum) include arrangements for the organization of the curriculum and instruction, for learning resources, and for specific learning experiences of particular groups of learners and individual learners. Some plans are written to serve as curriculum guides for teachers and others.

Figure 1: A Model of the Process of Curriculum Planning

local situations, or make entirely new plans. Each of these alternatives is chosen at times, even by the same planning group; it cannot be asserted with confidence that any one group of planners does in fact plan the curriculum at all times and places in American education.

There are two major issues as to who plans the curriculum which should be considered at this point as we are examining the nature of the curriculum planning process: (1) national or state and local curriculum control; and (2) the relationship of laymen, academic scholars, and elementary and secondary school educators in curriculum planning. Other issues as to roles in the process are dealt with later in this chapter.

NATIONAL OR STATE AND LOCAL CURRICULUM CONTROL?

Statutory provisions and tradition have perpetuated in the United States the legal responsibility of a state to establish and maintain an educational system. Further, this responsibility has largely been delegated to local communities. In our early history the principle of local autonomy in education rapidly became the accepted practice because it conformed to democratic beliefs and also to the realities of life in the early days of the nation. As each new state was organized, its government provided for the organization of local school districts, which had considerable responsibility for the schools. The local board of education, a legal body created by state law, exercises its authority within the framework of state legislation. The local school boards have major responsibilities for the establishment of the schools needed, the determination of most curriculum matters, the appointment of teachers, and, in general, the control of the schools. As to private schools, the character of curriculum control depends on the sponsorship of the schools. Parochial schools may be controlled by the hierarchy of the church concerned, whereas independent schools may be controlled only by their own proprietors or boards of trustees.

Despite the historic principle of state and local control of schools, including that of the curriculum, many forces have tended to create a relatively high degree of uniformity among the schools of the United States. Such forces as reviewed in this chapter, especially tradition, accreditation, authors and publishers, testing, educational foundations, and the profession of education, have operated to effect great similarities in the program of studies and other curriculum provisions of American elementary and secondary schools. Beginning in the 1950's and continuing vigorously in the 1960's, a strong argument persists between those who favor a higher degree of centralization of curriculum planning and controls and those who support the historic principle of state and local control. The argument is analyzed in the following paragraphs.

Arguments for National Curriculum Planning

The fact of existing uniformity and of national influences in the curriculum is frequently cited as an argument for stronger national curriculum control. Thus such data as those revealed in the status study of instructional practices, conducted for the National Education Association's Project on Instruction in 1961, are cited to show how local school workers are already influenced in curriculum decisions by national curriculum studies, federally supported programs, and textbooks used across the nation.[2] The argument is that these strong national influences need to be recognized and systematized in order to use them more effectively.

Another, perhaps a more fundamental, argument has to do with the need for greater national effort to improve American schools. The then new United States Commissioner of Education, Francis Keppel, stated this point in the following words in an address in March, 1963:

> Careful planning and concerted action can keep our educational strategists from degenerating into spasmodic responses to the alarms of the moment. But failure to move ahead with all speed can result in our becoming second-rate, lacking in trained manpower, lacking in the development of economic resources, and as a result lacking in influence, prestige, and strength among the nations.[3]

Related to this argument is that of the great range of quality in American education. Data are readily available to show that where one lives makes a great deal of difference as to the quality of education one receives. Although this point is most frequently used to buttress arguments for extended federal financial aid, it also can be and has been used effectively to support the idea of national standards in education. Thus Admiral Rickover in 1962 urged the Congress of the United States to set up machinery for the establishment of national scholastic standards. He suggested a small committee of "eminent, trustworthy, intelligent, and broadly educated men, to be something on the order of the English University Grants Committee or of our own General Accounting Office," whose task would be "to keep American education under close scrutiny." He stated further that this committee would be expected "to devise a system of examinations to be taken voluntarily but to carry Federal accreditation: preferably at different scholastic levels, and both at the transfer from high school to college, and from college to graduate departments of professional schools; also for teacher accreditation."[4] Admiral Rickover summarized his argument in the statement that this would be "a committee to set standards, to keep watch over the state of American education, to point out peril points, and to keep us fully informed on our competitive position in education—this is what I suggest would aid in correcting the deficiencies in our school system."[5]

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[2] Project on the Instructional Program of the Public Schools, *The Principals Look at the Schools: A Status Study of Selected Instructional Practices* (Washington, D.C.: National Education Association, April, 1962), pp. 23–27, 28–30, and 42.

[3] Francis Keppel, "The Changing Face of Education," an address delivered before Spring Conference of the Magazine Publishers Association, Statler Hilton Hotel (Washington, D.C.: March 26, 1963), p. 4. Mimeographed.

Some educators have supported a stronger national curriculum planning effort because of recognized inadequacies in the quality of curriculum planning at the state and local level. Thus at the 1961 annual Harvard Summer School Conference on Educational Administration, the then United States Commissioner of Education, Sterling M. McMurrin, stated that

> . . . we must free ourselves from the constant temptation of a provincial posture with reference to the function proper to our educational institutions. Our past local isolations are gone and the isolation of our Nation is gone. What we now do in our schools has importance not only for our immediate communities but for the Nation and the world.[6]

Commissioner McMurrin went on to say that he strongly supported the principle of local control of education, and that "control of the schools by the Federal Government would inevitably result in a degree of standardization in curriculum and practices that would destroy much of the variety and diversity in American education. . . ." He summarized his view in stating that "our task, therefore, is one of great difficulty for we must protect the local foundations and control of our schools while at the same time assuring that they will adequately serve the individual and the local community and region [and] at the same time move the Nation closer to the realization of the goals which are set for it by both its domestic and international affairs."[7] McMurrin's argument seemed to be essential for increased federal support to improved educational planning at the state and local level.

Paul R. Hanna, of Stanford University, has been closely identified with the arguments for stronger national curriculum planning efforts. In various articles and statements in the late 1950's and early 1960's Hanna presented a proposal for a national commission for curriculum research and development. Although he cited many arguments for such an organization, a particularly telling blow was apropos the present inadequacies in state and local planning:

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[4] H. G. Rickover, *Education For All Children: What We Can Learn from England*, Hearings before the Committee on Appropriations, House of Representatives, 87th Cong., 2nd Sess. (Washington, D.C.: Government Printing Office, 1962), p. 162.

Also see Rickover's *American Education—A National Failure* (New York: E. P. Dutton & Co., Inc., 1963). Part II consists of this testimony.

[5] Rickover, *Education for All Children*, p. 163. In Part III of his *American Education*, Rickover refers to this as the "National Standards Committee."

[6] Sterling M. McMurrin, "Education and the National Goals," an address delivered at Annual Harvard Summer School Conference on Educational Administration, Harvard University (Cambridge, Mass.: July 20, 1961), p. 5. Mimeographed.

[7] *Ibid.*, p. 9.

> Let us examine for a moment the shortcomings of our present efforts. The typical local community spends a tiny fraction of its budget on curriculum research and development. By contrast, modern agriculture and industry spend relatively large sums on research, design and development. The usual school pattern is to assign to a small curriculum staff attached to the central school headquarters the task of stating educational objectives, designing a curriculum, formulating a program of studies, publishing teaching guides, and selecting instructional materials. What shortcomings are inherent in this practice?
>
> First the range of human knowledge and values is so vast that it requires a high degree of competence to arrange a priority of generalizations for a school curriculum. Where on the staffs of most district or state education departments do we find the scholarship in all the branches of science, mathematics, social sciences, and humanities adequate to the magnitude of the job here suggested?
>
> In the second place, the school curriculum has seriously lagged behind the rapidly expanding frontiers of human knowledge. . . .[8]

A *Time* editorial writer in 1962 summed up the argument of inadequacies in local curriculum planning by citing Conant's description of American education as a "Noah's Ark" and then added his own summation:

> . . . a happy confusion of 35,300 independent school systems, in which standards vary so widely that an A grade in one school may be worth a D in another. At their worst the schools are mixed in graft, patronage and political pressure. At best, the system is magnificently tuned to local needs, producing some of the best schools in the world.[9]

Arguments for Continued State and Local Curriculum Control

Although many arguments are presented to support the historic principles of state and local control of education, three seem to us to be of greatest significance. First, there is the powerful argument that national curriculum planning represents a centralization of education and that such centralization is opposed to democratic principles. This argument was summed up by Hollis L. Caswell in his annual presidential report to the Trustees of Teachers College, Columbia University, in 1960–1961:

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[8] Paul R. Hanna, "Proposed—A National Commission for Curriculum Research and Development," *Phi Delta Kappan*, 42:332 (May, 1961).

[9] "Standards for Noah's Ark?" *Time*, March 16, 1962, p. 50.

> But the fact is that *centralization* vs. *state and local control* is the real issue. Each of the proposals involves an agency with *power*, even though it may not have a legal basis for enforcement. Imagine the situation when the *national curriculum commission* made a recommendation. It would take an extremely well-established local administrator to oppose such a recommendation with his local board of education and community. Advocates of a national commission wish to establish it because, through its exclusive role, its national stature, and the nature of its membership, its recommendations would have a special authoritative basis and its status would be particularly powerful.
>
> The proposal to separate such a commission from the administration of education in the Federal Government through the establishment of a self-perpetuating body only makes matters worse. Such a group would have most of the influence of any specially designated national body and would be responsible to none.[10]

Another aspect of this argument for continued state and local control is the fear of many educators and citizens that national control vested in a single national agency would greatly increase the possibility of curriculum influence by special-interest groups. Caswell, for example, further noted:

> Our decentralized educational system is one of the greatest safeguards we have against tyranny. No person or clique or foundation or association can easily gain control of all American education.[11]

A second significant argument for continued state and local control is implicit in the philosophy of curriculum change which gives great recognition to the role of local experimentation. Many, perhaps nearly all, curriculum leaders have observed that real progress in curriculum development is on a broken front. Schools do not achieve minimum or other standards at the same time. Neither do they develop with equal interest and success new ventures in the curriculum—nor should they, most believe. Fundamental progress in curriculum development is seen as coming through careful and interested experimentation in the local school situation. Curriculum change cannot be mandated from sources external to the curriculum planning group.

A third argument, which alone would almost convince us of the necessity of continued state and local curriculum control—is the nature of curriculum planning. Our observations as well as those of curriculum leaders and researchers in general is that fundamental curriculum change comes through the involvement of people in the change process. New courses and other curriculum changes introduced in a school without the prior study and commitment of the school faculty are almost invariably doomed to failure. School after school has had to retract a curriculum innovation because of a failure on the part of leadership in the situation to get sufficient involvement of both their professional colleagues and the parent clientele of the school. In fact, in her classic study of curriculum change, Alice Miel concluded that the tradition of local control of schools was a powerful aid in changing the school curriculum. She observed that "the fact that the problem can be attacked and solved pretty much on the local community level makes it one that is less formidable than many social problems."[12]

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[10] Hollis L. Caswell, *Control of the Curriculum in American Schools* (from the Annual Report to the Trustees, 1960–1961; New York: Teachers College, Columbia University), p. 5.

[11] *Ibid.*, p. 6.

Resolving the Issue

We recognize the mobility of the population, the need for a stronger national effort in education, and the inadequacies of state and local curriculum planning. Nevertheless we recognize just as clearly the relationship of democratic principles and local control of education. We strongly affirm the nature of curriculum change as a local, broken-front, people-involved phenomenon.

To summarize our point of view, we believe curriculum decisions should be made by those most directly involved in the planning and carrying out of learning activities for pupils: teachers, school administrators, boards of education, and parents. These participants in planning should be familiar with the great body of literature available and with the views of national leaders who have established themselves as insightful and scholarly authorities on education. They should study research, evaluate experiments, judge innovations, read reports of organizations, examine projects sponsored by foundations, and in any other feasible ways become highly knowledgeable on educational matters, but those directly involved in the operation of schools in the community should make the decisions necessary for the education of the children of that social group. The state legislature and the state department of education should establish a structure for the organization and management of the local schools and set general patterns for the program that have the highest promise of ensuring excellence in the schools, but no other agency or vehicle of government should have the authority to dictate the nature and character of the curriculum, except as the Supreme Court of the United States needs to ensure observance of our fundamental rights of citizenship.

It is our belief that national purpose—the hopes, expectations, needs, and dreams of the American people—will best be served by their educational institutions, as they have throughout the history of this country, by holding fast to the basic aim of education in our democracy: the fullest possible development of each individual in socially approved directions. A grave national emergency will, of course, necessitate the establishment of some special educational structures and programs for meeting it, but on a continuing basis the education of children should not be subordinated to some vague concepts of national purpose formulated by government officials. If changes are to be made in the education of children, let those who advocate such changes submit them to the curriculum planners in each community for decision. If these conscientious American teachers, administrators, school board members, and parents cannot be trusted to make valid decisions, then our democratic institutions have indeed failed us. If the nation needs more physicists or more linguists in some rare Oriental language or African dialect, let the need be reported by competent government officials: the schools are likely to make these occupational opportunities known to interested pupils. If its monetary and other rewards are appealing enough, young people will usually be willing to enter a profession. To meet manpower needs in highly specialized occupations, special educational institutes or programs may well be established by appropriate agencies for students at advanced levels.

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[12] Alice Miel, *Changing the Curriculum* (New York: Appleton-Century-Crofts, Inc., 1946), p. 188.

The best policy for inculcating the basic ideals and faiths of the American people is not to modify the curriculum of the school willy-nilly on the basis of some current demands of government agencies or spokesmen for special-interest groups, but for all appropriate social agencies and individuals to assist in any way possible the curriculum planners in tens of thousands of American school systems to make the best possible decisions about the education of children and youth in the nation's schools.

We wonder if it is not possible in our great country to provide such levels of financial support from both federal, state, and local sources as to make possible greatly improved leadership in planning processes in the local school systems and at the state level? Would it not be wiser to maintain our historic principles of democratic school organization and curriculum planning by eliminating present deficiencies rather than eliminating the principles? Cannot we afford excellence in educational programs, programs which use all of the national leadership and resources which are appropriate and at the same time are tailor-made to local populations and conditions? We ourselves believe that these questions can be answered affirmatively and propose the following basic lines of development to retain the principle of state and local curriculum responsibility with full use of national resources and leadership:

1. Continued and increased federal financial aid to the states for nationwide improvement of education

2. The strengthening of state departments of education and state curriculum leadership, perhaps with the development of such interstate compacts as Conant proposed in his 1964 pronouncement on *Shaping Educational Policy*[13]
3. The development of higher standards for the preparation and employment of curriculum leadership
4. A great increase in the quality and focus of curriculum research through the establishment of such national and regional curriculum research centers as was anticipated by the Education Act of 1965.
5. Continued and increased leadership by professional associations in curriculum and instruction
6. Continued support by government and philanthropy of curriculum research with greater opportunity for leading professional associations to be represented in planning, designing, and disseminating curriculum research studies

LAYMEN, ACADEMIC SCHOLARS, AND ELEMENTARY AND SECONDARY SCHOOL EDUCATORS

Many discussions of who should plan the curriculum have debated roles to be performed by different people: laymen, scholars in the academic disciplines, educators directly concerned with elementary and secondary schools, and others. We ourselves doubt if one can categorically assign specific and exclusive functions to these groups, although there are clearly areas of competence and responsibility that aid in differentiating the respective roles.

Laymen, as the total public exclusive of professional educators, have a great stake in the public education system. We deal with their relationship to education in Chapter 3, and here need only note that they can and should review the actions of their elected boards of education and legislatures to ensure the successful functioning of the educational system. Those laymen who serve on school boards and in legislatures have the direct responsibilities of their offices. But the group of laymen who have the most direct relationship to the curriculum of their schools is the parent population. Those citizens whose own children are experiencing the learning opportunities provided by the schools need to give much consideration to ways and means of constructively influencing and participating in the curriculum planning activities of their own schools. Parents can and do participate by proposing objectives and programs for their schools, by making their reactions to the school program known to representatives of the schools, and especially by working with their own children and teachers in planning the appropriate learning opportunities. As parents, their decision-making responsibilities logically relate only to their own children, but they can provide much data and counsel to the professional educators who must make decisions about the program of their school as a whole.

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[13] James Bryant Conant, *Shaping Educational Policy* (New York: McGraw-Hill Book Company, Inc., 1964). Also see for a very critical analysis of Conant's book, Richard Wynn, "An Inept Lesson in Educational Policy Making," *Phi Delta Kappan*, 46:251–256 (February, 1965). Wynn believed more study must be given to the "dynamics of the essentially political process of policy making."

The relative influence of the educator working directly in or with elementary and secondary schools and of the academic scholar has undergone some change in the twentieth century. Historical reviews of curriculum planning[14] indicate the dominance of the specialist in the subject field until well in this century. The subject specialists prepared the committee reports and wrote the textbooks that generally determined the organization and content of the curriculum. But since World War I the growing professionalization of teaching has been accompanied by a greater influence of teachers in curriculum planning.

Although the classroom teacher has always been a curriculum planner in terms of his selection of content from the textbook or course of study, the participation of teachers in curriculum planning for the school system began to spread in the 1920's. During this decade a number of school systems, including Los Angeles, Denver, and St. Louis, organized curriculum programs in which large numbers of teachers worked on various types of curriculum committees primarily concerned with the production of courses of study. During the 1930's a number of state programs for improving instruction were organized, many of them in the South with Hollis L. Caswell and Doak S. Campbell of George Peabody College for Teachers as consultants. During these same decades school systems began to add curriculum directors, and the currently common practice of curriculum development by teacher committees spread rapidly. Unknown thousands of committees, generally involving, in addition to teacher representatives, administrative and supervisory personnel and occasionally lay citizens, now work actively across the United States in developing curriculum plans for their school systems and individual schools.

Recently a very significant development has occurred in American education which to some might represent a swing of the pendulum back to the dominance of the academic scholar in curriculum planning. The post-Sputnik clamor for more rigorous educational programs, the subsidies by the federal government of curriculum studies in certain major fields, and perhaps most of all some scholars' reawakened interest in education at the elementary and secondary level brought about a resurgence of work by national committees through national projects in curriculum development. Academic specialists have been heavily involved in these projects.[15]

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[14] See Ronald C. Doll, *Curriculum Improvement: Decision-Making and Process* (Boston: Allyn and Bacon, Inc., 1964), Chap. 1; Hollis L. Caswell and Associates, *Curriculum Improvement in Public School Systems* (New York: Bureau of Publications, Teachers College, Columbia University, 1950), Chap. 3; and Prudence Bostwick (chm.), J. Cecil Parker, and Gladys L. Potter, *One Hundred Years of Curriculum Improvement, 1857–1957* (Washington, D.C.: Association for Supervision and Curriculum Development, 1957).

Some educators feel that curriculum planning has now returned to its pre-1920 process in which the dominant influences were national committees and specialists in the disciplines. In our opinion there is considerably more participation in curriculum planning in the 1960's on the part of these specialists than was true in the 1930's, 1940's, and 1950's. On the other hand, we must recall that prior to the 1920's curriculum planning had been fundamentally the preparation of textbooks by scholars. Today the process of curriculum planning in most school systems involves the work of many committees of school personnel and in some cases an overall curriculum planning council of some representative type. Although these committees and councils may be heavily swayed by the recommendations and materials from the national projects and the specialists, the fact remains that there is every opportunity for the local groups to make wise selections from these recommendations and materials rather than to adopt them in wholesale fashion, as was true in the pre-1920 era of curriculum planning. Thus curriculum planning in the United States has given heavy emphasis to the role of the academic scholar but it has also involved to an increasing degree the participation of classroom teachers and other elementary and secondary school educators. Both groups are now much involved in developing curriculum materials, plans, and programs. Generally speaking, the role of the academic specialist is greatest at the level of national curriculum studies and textbook preparation, whereas the classroom teacher and administrator are most involved at the level of the local school district and frequently within the state curriculum planning organization. However, there are many communities in which the academic specialists personally participate in the work of curriculum planning groups. There are also many national curriculum studies in which classroom teachers have been selected for direct participation in the planning of curriculum projects, the preparation of textbooks and other curriculum materials, and the tryout of new materials. Perhaps there is approaching a happy union of the academic specialist and the professional elementary and secondary school educator in the development of wiser curriculum plans and materials.

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[15] See Dorothy M. Fraser, *Current Curriculum Studies in Academic Subjects*, A Working Paper Prepared for the Project on the Instructional Program of the Public Schools (Washington, D.C.: National Education Association, 1962); Robert S. Gilchrist (chm.), *Using Current Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, 1963); and Chapter 9 below.

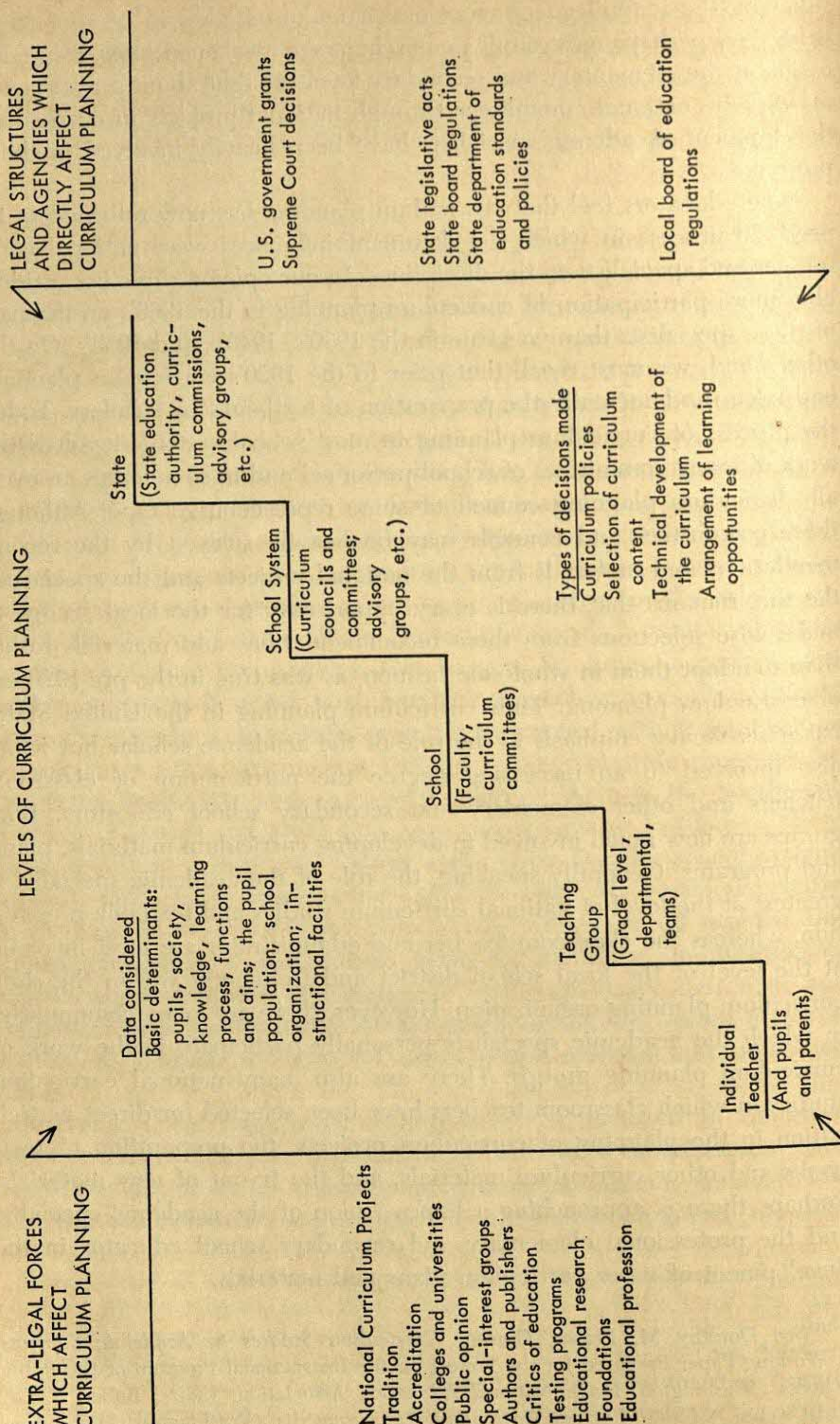
EXTRA-LEGAL FORCES WHICH AFFECT CURRICULUM PLANNING
National Curriculum Projects
Tradition
Accreditation
Colleges and universities
Public opinion
Special-interest groups
Authors and publishers
Critics of education
Testing programs
Educational research
Foundations
Educational profession
LEVELS OF CURRICULUM PLANNING
Data considered
Basic determinants: pupils, society, knowledge, learning process, functions and aims; the pupil population; school organization; instructional facilities
Individual Teacher (And pupils and parents)
Teaching Group (Grade level, departmental, teams)
School (Faculty, curriculum committees)
School System (Curriculum councils and committees; advisory groups, etc.)
State (State education authority, curriculum commissions, advisory groups, etc.)
Types of decisions made
Curriculum policies
Selection of curriculum content
Technical development of the curriculum
Arrangement of learning opportunities
LEGAL STRUCTURES AND AGENCIES WHICH DIRECTLY AFFECT CURRICULUM PLANNING
U.S. government grants
Supreme Court decisions
State legislative acts
State board regulations
State department of education standards and policies
Local board of education regulations

Figure 2: Decision Making in Curriculum Planning

DECISION MAKING IN CURRICULUM PLANNING

The processes of decision making in curriculum planning are best identified, we believe, by analysis of the types of decisions made and at what levels. In this section we present such an analysis together with a classification and brief description of the data considered in the decision-making process, and of the various forces which impinge on the curriculum planners. The entire analysis is shown graphically in Figure 2, to which specific reference is made at appropriate points later.

Levels of Curriculum Planning

Although the types of curriculum decisions made at various points vary from one school situation to another, the organization of American public education is sufficiently uniform to permit a classification of the levels at which curriculum planning occurs for public elementary and secondary schools. As charted in Figure 2, these levels are state, school system (a group of schools under the same administrative head and board of education), the school, the teaching group (however classified in the school —departments, grade levels, teaching teams, and so forth), and the individual teacher. Although the chart is arranged in ladder style, it should not be assumed that curriculum plans are uniformly passed either up or down this ladder. Certainly some set of state requirements does influence the other levels, and certainly the plans of the individual teacher are nearest the teaching situation. But between the state and the individual teacher, one finds great variation in the extent to which curriculum planning does occur at the other levels and in the relationships which exist between these planning situations. Thus, in one situation the teacher may make his curriculum plans by direct reference to the state course of study with little or no consultation of his colleagues in the school and system. In another, there may be carefully formulated plans of curriculum scope and sequence for the entire system, modification and expansion of these by individual school curriculum planning committees, and cooperative work of teaching groups within the school in developing resource units and other curriculum guides. Since the four levels other than state are much less distinct in frequent practice, we are grouping these levels as "local" in the following discussion.

Planning at the State Level. The fifty states have varied in the ways they influence the curriculum of their local schools and in the extent of their influence. Perhaps the most easily identifiable influences are state constitutional provisions, legislative acts, and state board or department regulations which prescribe subjects to be taught in the schools, graduation requirements, time allotments, and special programs and emphases. These prescriptions generally stipulate a basic program of studies for the elementary school, including the customary subjects of language arts, arithmetic, American history, geography, science, health, physical education, art, and music, but they may make more specific requirements of some but not all individual subjects for the secondary school.[16] The most common requirements for the secondary schools have been in English and in American history, with many also prescribing mathematics, science, health, and physical education. Other more specific requirements of individual states have included such matters as state history, driver education, conservation, and the effects of alcohol and narcotics.

Planning at the state level may control or restrict local curriculum planning through regulatory measures other than these curriculum prescriptions. State textbook adoption still prevails in several states. The state may set special requirements to be met for schools to receive its support of special programs. State accreditation standards define many curriculum policies relating to such matters as the program of studies, extraclass activities, library and other learning resources, organization of classes, and many others. State supervision and inspection may have almost the effect of regulation. State examination systems, such as the Regents' examinations in New York, may influence very greatly local curriculum plans. State legislative investigations and reports have at times inhibited local experimentation.

As we see it, to ensure an adequate and indeed excellent program throughout the state, the state should set a broad framework of the school program and provide sufficient general support, with standards to be met in order to receive that support. Regulatory measures are undoubtedly needed, but if the state educational agencies stop with regulations and standards, local decision making is not aided in moving beyond requirements and minimums to ever-improving educational programs. Thus, we consider the most important function of planning at the state level to be that of working with local leadership in making plans which will aid local school districts in moving forward with their own curriculum planning.[17] Some significant steps in this direction are as follows:

1. Use of state curriculum commissions, committees, and advisory groups, representing educational groups throughout the state, in determining state curriculum policies, such as those we have identified, and also in recommending ways and means whereby local systems may organize their own curriculum improvement programs.
2. Use of such groups also to prepare state curriculum guides which are suggestive rather than prescriptive, designed to aid local cur-

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[16] See Grace S. Wright, *Requirements for High School Graduation in States and Large Cities,* U.S. Office of Education Bulletin 1961, No. 12 (Washington, D.C.: Government Printing Office, 1961).

[17] See for a proposal of new state organizations to facilitate curriculum evaluation and planning, Henry M. Brickell, *Organizing New York State for Educational Change* (Albany: New York State Department of Education, 1961).

riculum planning groups in making their own decisions about curriculum issues.

3. Establishment of state curriculum evaluation commissions to carry on deliberate and informed evaluation of curriculum proposals from many sources, and to serve liaison functions with such commissions in other states and with national and regional curriculum studies and projects.
4. Sponsorship of curriculum research studies in the state, with financial and other aid to the schools serving as research centers.
5. Coordinating curriculum improvement efforts in various school systems through arrangement of dissemination conferences and publications.
6. Arrangement, frequently in cooperation with professional associations, of state-wide or regional conferences dealing with particular curriculum problems and aiming to arrive at better and more widely used plans for dealing with these problems.
7. Working with state-wide organizations interested in but outside the field of education in order to develop understanding and support of the educational program of the state, and also to secure suggestions for its improvement.

Curriculum Planning at Local Levels. Because of the great importance and prevalence of curriculum planning at the local levels (school system, school, teaching group, and teacher—see Figure 2), Part 5 will discuss the procedures employed. Here it may suffice to illustrate the relationships of the several local levels, and to summarize the responsibilities of local decision making.

To illustrate the relationship of the local levels, one of us recalls an extended experience in working with the development of a core curriculum program in certain junior high schools. The original idea for this program was developed at a summer workshop involving all teachers of the school system. One of the recommendations to the school administration which came from the workshop groups was that there be established some type of core curriculum in the junior high schools as a transitional program between elementary and senior high schools. The curriculum planning council of the school system invited junior high school principals and faculties to determine if they would be interested in such a development. Initially two of several junior high schools indicated such an interest and a consultant was designated to work with these schools. In order to carry forward the planning of the program, each of these two junior high school faculties worked in a school practicum meeting every other week for a year. In the course of this practicum the entire junior high school program was reviewed and more detailed plans were prepared for the block type of program which eventuated. This program, which initially combined instruction in language arts, social studies, and a health course in grade 7 of one school

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and these plus arithmetic in the other school, was planned in the practicums, and resource units for the program were prepared by the teachers immediately concerned. These resource units were presented to the total faculty for consideration and were later mimeographed for use by teachers in other schools as the program spread. Thus there was participation in the development of this program by the school system through its workshop and curriculum planning committee, by the school faculties through the practicums, by the core teachers meeting to prepare the resource units, and by the individual core teacher in his own development of the program in the classroom.

The foregoing illustration indicates some of the matters on which decisions are made in local curriculum planning. A more extended list of illustrative policy questions which have to be decided at some local level—and no hard-and-fast rules can be suggested as to the level—follows. (The chapter number following each group of questions indicates our own discussion of these matters.)

What group or groups shall carry on continuing curriculum planning for the school system? How shall these groups be selected? How shall their contributions be recognized? (Chapter 12)

What organization of the curriculum shall constitute the framework of learning opportunities provided? What variations from the organization can be encouraged? (Chapter 8)

What criteria shall be used in selecting curriculum content? What developments in the subject fields may guide planning activities? (Chapters 5, 8, 9)

What procedures shall be used for selecting and evaluating curriculum innovations? What support, financial and otherwise, can be given to encourage innovations? How shall innovations found desirable be disseminated to other situations? (Chapter 12)

How shall learning groups be organized? What variations in instructional organization should be made for particular groups of learners? What policies of pupil progress shall guide curriculum planning as to the sequence of learning opportunities? (Chapters 10, 11)

What learning resources and facilities are needed for the curriculum planned? How can particular needs in individual learning situations be met? (Chapter 14)

What roles shall be performed by various participants in curriculum planning and implementation? by curriculum leaders? by teachers? by administrators? by consultants? by parents? by pupils? (Chapters 1, 15)

What types of curriculum guides are needed to aid teachers? Who should develop them? How are they to be used by teachers? (Chapter 1)

What are the responsibilities of teachers for planning for their own teaching situations? What resources are available to aid them? (Chapters 13, 14.)

What differentiation of the curriculum is to be made for individual learners? How can teachers work with individual pupils and their parents to achieve excellence in the curriculum experienced? (Chapter 11)

How shall the curriculum be evaluated? What continuing programs of curriculum evaluation, experimentation, and research can be supported, and how shall they be conducted? (Chapters 7, 15)

There are, of course, many other questions, both general and specific, to be dealt with in curriculum planning at the local levels; and in this book we deal with other questions besides those just listed. However, these give some indication of the scope of local curriculum planning.

Other Aspects of Curriculum Planning

As indicated in a previous section, there is a great deal of curriculum planning at the national level in the United States. The many curriculum studies supported by the federal government or other national organizations (see Chapter 9), the conferences convened by the United States Office of Education, the National Education Association and other national organizations, and even some of the special subsidies to curriculum areas given by Congress are examples of national curriculum planning. Although these activities may have great influence on state and local curriculum planning, we see them primarily as resources for the state and local units which have legal control of the curriculum.

The real "grass roots" level of curriculum planning is the pupil himself. It is at this level that the choices are made which determine the actual experiences constituting the individual's own curriculum. (Again we distinguish between the curriculum "planned" and the curriculum "had.") After all the factors in curriculum planning have been considered by the responsible groups at all levels, it is in terms of his own interests, aspirations, and reflections that each learner finally selects those curriculum opportunities which will determine the quality of his education. In some instances, the choice making is deliberate and ordered so that it involves, for example, the selection of elective courses at the secondary level. In all instances of classroom procedure, however, there is the less overt but nevertheless final judgment which the individual makes as he chooses whether to pay attention or not to pay attention, to give or not to give of his energies, actively to seek answers to questions or merely to memorize and recite them. Thus it is at the level of the individual pupil that really final curriculum plans are made.

Types of Decisions

Many individuals and groups have roles to play in the development of curriculum plans. We doubt that it is either possible or desirable to assign, except in a particular situation, specific roles by categories of individuals and groups, such as boards of education, professional educators, laymen, parents, pupils, or academic scholars. We believe that more rapid progress can be made in curriculum planning by recognizing the major types of curriculum decisions with agreement on general guidelines as to individuals and groups who have contributions to make to each type. Then in particular situations, as each aspect of the curriculum planning job is completed, persons are used as their contributions are available. We recognize four major types of decisions to be made in the process of curriculum planning:

Policy making is perhaps the most difficult of all decision making. Its difficulty is due in part to the clamor of everyone to participate in this task, since almost all citizens as well as professional educators feel a stake in the educational process. In the United States our general conceptions of curriculum policy making involve a role for professional organizations and more particularly for the legally constituted groups, namely, state and local boards of education. Nevertheless, we recognize fully that decisions as to what to teach and what not to teach in local school systems must be shared not only by the local board of education and the professional staff but by the taxpayers and parents and the pupils themselves. The challenge of curriculum planning is to determine orderly processes whereby the wishes of all concerned may be considered in the final determination of curriculum policy by legally constituted authority.

Content selection, once a task only of textbook writers, is also an aspect in which many individuals and groups want to and do participate. Certainly the academic scholars have great contributions to make in the discovery and presentation of knowledge. Authors and editors, too, have much to contribute in their selection of materials for printed sources. The prejudices of special-interest groups, the interests of taxpayers and parents, and the readiness and interest of pupils themselves also enter into this difficult task. We feel, however, that the final selection of curriculum organization and opportunities for particular pupils, classes, and schools should be—indeed must be—the responsibility of the professional educators who know the population to be educated as well as the potentials of their school organizations and facilities.

Technical development of the curriculum involves decisions as to the conduct of curriculum research and evaluation, and the preparation of curriculum guides, syllabi, resource units, and many other types of materials which give guidance to teachers and pupils. The technician is also involved in the selection of teaching-learning aids, the use of educational television and programmed instruction, and all the other aspects of instructional technology. In these more technical tasks there is real need for specialists in curriculum development, whether they be classified as curriculum directors, audiovisual specialists, consultants in instruction, or by other terms. The specialists serve as powerful resources and, indeed, as catalytic agents in the process of curriculum planning. However, the job is not one for the expert alone: administrators, classroom teachers, resource persons in the community, and professional people in publishing and other industries may contribute to these significant aspects of curriculum development decisions.

Arrangement of curriculum opportunities is the central job of the teacher. Decisions as to the nature and content of learning experiences involve much more than the telling by lecture, television, recitation, or other means, which has characterized so much classroom practice. The aspect of curriculum planning which we might designate as "presentation" is the link between the planning done external to and also prior to the interaction of teacher and pupil. It is at this point of interaction that the teacher decides almost from minute to minute, and from pupil to pupil, how to aid and abet the learning experiences of individual boys and girls.

Data for Decision Making

Although there is little information about education that does not in some way relate to curriculum planning, the four types of data listed in Figure 2 are of particular importance to any individual or group responsible for planning some aspect of the program of the schools of a state, or of a school system, or even of an individual school, classroom, or pupil. First of all are the many types of data that in this book we call curriculum determinants. These data are much the same for all American schools: our American social structures, values, and demands; the characteristics of pupils; the process of learning; the nature and structure of knowledge; the functions and aims of the school. We present pertinent facts and generalizations about each of these determinants in Parts 2 and 3. But the planners' own understandings and beliefs about children and youth, and the aims of society and of the school or school system, their conceptions of learning and the learning process, their understandings of the nature of knowledge—indeed all their educational training and experience—definitely guide their curriculum decisions. One hopes for the good of pupils in school that those who serve as curriculum planners, in fact, all those associated with the school, will bring to their job a wealth of information and insight about the foundation fields in education and especially about appropriate and desirable educational goals.

Other sets of data are unique to each planning situation. Thus those who plan the curriculum must first have in mind a particular *pupil population.* Whether it be the population of a state, a particular school district, an individual school, or one classroom, the greater the store of information about these pupils—their characteristics, needs, and proficiencies—the more likely the curriculum planned will approach the curriculum they need. Obviously the nearer the planners are to the pupils, the more complete their information can be. It is for this reason among others that we strongly believe that the most effective curriculum planning must always be for particular youngsters in an individual classroom and school.

Second, the *organization* of the school itself is a basic consideration in curriculum planning for that school. It is to be hoped, of course, that the organization will be shaped by the curriculum rather than vice versa. But the curriculum planning group must start with whatever limitations are created by the way the staff is organized, the basis on which pupils are assigned to instructional groups, and even the schedule on which the school operates. It is to be hoped that these factors may be changed by the curriculum planning group or on their recommendation; nevertheless, the facts of the organization, its flexibility, and its possibilities are highly significant data in program plannng.

Finally, the school's *facilities* for instruction are important factors in any curriculum decisions. Inadequate finances and insufficient space and equipment drastically limit the learning opportunities that can be provided. Again it is to be hoped that the curriculum planning group will be influential enough to secure whatever additional facilities are needed, for until there are adequate laboratories for industrial arts, homemaking, science, and other subjects, laboratory type of opportunities cannot be planned; until there are teachers qualified to teach foreign languages, the new mathematics, or other needed subjects, these cannot be offered; and until the school system supports financially the in-service education program, the employment of consultants, or the production of curriculum materials, these too will be nonexistent. On the other hand, some curriculum planning groups are fortunately situated in schools where the most modern and complete facilities, as well as adequate resources in audiovisual aids, television, and programmed instruction, are available; in these situations adequate utilization of the available resources and facilities challenges curriculum planners. In both types of situations—the well-equipped and the poorly equipped—curriculum planning needs a realistic inventory of what is available.

Forces Affecting the Decisions

Curriculum planners might find decision making relatively simple if it were only necessary at any level to identify the questions on which decisions are needed, organize the pertinent data, and reach the conclusions which seem soundest to the persons directly concerned. But another element or series of elements must be reckoned with—the legal and extralegal forces which very significantly influence all curriculum decisions.

In this chapter we have described the operation of the legal structure of public schools in the United States and called attention in Figure 2 and elsewhere to the specific means of legal control, but the absence of a federal system of education does not mean that the federal government exerts no influence on curriculum planning. The decisions of the United States Supreme Court have affected the school program regarding such matters as the assignment of students to schools and religious instruction. The federal government has more directly influenced curriculum planning through its various grants for educational purposes. Thus the programs of vocational education have been subsidized by various federal grants beginning with the Smith-Hughes Act of 1917, and the National Defense Education Act of 1958, and subsequent extensions prior to 1964, provided special financial assistance to improve instruction in science, mathematics and modern languages, and to improve counseling and guidance services. The National Defense Education Act Amendments of 1964 broadened the scope of subsidy considerably to include as "other critical subjects" in Title III (equipment and materials), history, civics, geography, English, and reading; and to provide for teacher institutes (Title XI) in history, geography, modern foreign languages, reading, and English, as well as for teachers of disadvantaged youth, and for library personnel and educational media specialists.

Federal funds have also been provided for supporting national curriculum studies in several fields, especially those originally subsidized by the National Defense Education Act, and educational research of various types. The Elementary and Secondary Education Act of 1965 provided $1.3 billion for education, most of it for schools serving low-income families and with specific support for expansion of libraries and for educational research and experimentation.

It can be argued that these federal influences, other than Supreme Court decisions, are really not legal controls on the curriculum. That is, the states and school districts do not have to accept grants for special purposes, and therefore do not have to meet whatever requirements or controls the grants stipulate. But the states and districts have usually been eager to take advantage of any financial aid possible, so that to the extent requirements are stipulated and met there are forces on curriculum planning emanating from the federal governmental structure. We may note that the requirements are not generally unreasonable; the real problem that federal grants frequently present to curriculum planners is their "special" nature. When the federal government supports one program but not another, state and local agencies may have to provide competing support for the others or allow the federally aided program to take precedence. Many educators consider the system of special or categorical grants to favor certain curriculum areas a repudiation of local curriculum control, and urge that federal grants be general in nature with the decisions as to their allocation among curriculum and other needs to be made at state and local levels. In 1964, however, the Educational Policies Commission recommended "in view of the failure of the Congress to establish general nationwide federal aid to education" and of the existing special programs, that "educational leadership devote immediate and detailed attention to the improvement and spread of categorical aids."[18] Obviously, the Education Act of 1965 did broaden the scope of aid.

The legal forces which most significantly and broadly affect curriculum planning are those we have already noted: state legislation, and regulations and policies of the state board and department of education, and policies and regulations of the local board of education. These forces should and generally do provide a framework of policy in which local curriculum planners can operate, but at times they may also set limitations and restrictions which seriously inhibit creative curriculum planning, although such situations are frequently susceptible to change by professional leadership. But the most influential and frequently the most unchanging forces operating on curriculum planners are the extralegal ones which we now briefly identify.

National Curriculum Projects. Several references have already been made in this chapter to national studies in various curriculum areas, and Chapter 9 gives primary attention to projects of great importance in the 1960's. These projects, designed to develop new organizations of curriculum content and new instructional materials, are clearly related to other extralegal forces described here—colleges and universities, which usually provide the project directors; educational research, which sometimes underlies the project; foundations, which, along with the federal government, have supported many projects; and authors and publishers, who put the new content and materials in textbook form. Many of the projects have had federal financial support through the National Science Foundation, but, as we pointed out above, the schools are under no legal obligation to use them.

Nevertheless, one of the great realities of curriculum planning in the mid-1960's is the tremendous impact of the national curriculum projects. We merely note this fact here; see Chapter 9 for a detailed review of this phase of curriculum planning.

Tradition. The force of tradition affects curriculum planning both helpfully and adversely. On the favorable side, the tradition of education itself and its importance led to the establishment of schools in America and keeps alive educational systems even in communities sorely disturbed by developments in other fields. On the adverse side, tradition operates as a critically negative factor in resisting educational change. It is this adverse effect, of course, which limits most directly the possibilities of forward-looking curriculum decisions.

The first objection many teachers and laymen make to a new curriculum proposal is, "We've never done that. We've seen this work—why change?" Adherence to traditional practices gives stability and continuity to the school program but it also may inhibit the acceptance of new ideas. Decisions which rely on tradition can do no more than perpetuate the status quo. Educators need constantly to analyze and evaluate all aspects of the program of schools to make certain that only the best program is provided. "Best" is not synonymous with "oldest" or "newest." Open-mindedness is an indispensable characteristic in those who plan the curriculum, but an understanding of the values of past practices and of school and community traditions is just as important.

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[18] The Educational Policies Commission, *Educational Responsibilities of the Federal Government* (Washington, D.C.: National Education Association, 1964), p. 18.

Accreditation. The force of accreditation by accrediting associations is perhaps less powerful in the operation of secondary schools in the United States today than it was in the earlier decades of this century. The regional accrediting associations organized around the turn of this century rendered great services to the cause of secondary and higher education by providing standards and procedures for accreditation which brought about greater uniformity among secondary schools and colleges and also a higher degree of articulation between these levels of education. Although the accrediting associations still wield considerable influence in determining the characteristics of secondary schools, the accrediting standards and procedures of state departments of education have in general taken on much more significance. But those who would change high school programs are still constantly confronted by questions about what the regional association (or the state standards) require on such matters as teaching loads and assignments, size of classes, daily schedules, and grading systems. Frequently, whether a major change can be made in organization depends on whether an exception to the accrediting standards can be allowed; fortunately, it usually can be if there is a well-conceived plan.

Although accreditation patterns vary among the states, state financial aid is invariably administered according to some expectations of minimum standards for the educational program. Undoubtedly many state departments of education have been able to exert substantial influence on the improvement of instruction by the accreditation procedure, although state standards and local inertia can stifle improvement, too.

Colleges and Universities. From the establishment of the first American secondary school, the Boston Latin Grammar School, in 1635, preparation for college has been the dominant influence determining the high school curriculum. The popularization of secondary education in the twentieth century directed more attention to the needs of youth who would not attend college, but the recent marked increase in the proportion of graduates entering college has greatly enhanced the respect for college entrance requirements by parents and their children and the schools.

The influence of the colleges and universities is felt in many ways. The national committees which have so greatly affected course prescriptions, textbooks, and courses of study have generally been heavily weighted with college professors. Many universities offer testing services which, along with all the other testing services, influence curriculum planning as described below. At the same time it should be noted that most of the significant recent research which has helped to shape the curriculum has also come out of colleges and universities. The fact is that public schools have achieved much and can achieve more with the continued assistance and support of higher education in America.

But local curriculum planners must constantly contend with objections to any proposal for curriculum change: "The colleges won't accept this" or "This won't prepare our students for college." Very frequently, the objection is without foundation, or is a generalization based on the requirements of a very few colleges. Our experience suggests that a well-informed high school counselor or college admissions official is an excellent resource for the curriculum planning committee of a school system or of an individual high school. Such a person can usually deal with objections of these types, and also help in developing liaison with college and university personnel who may be interested in working for articulation of curriculum planning between high school and college.

Public Opinion. The elusive force of public opinion is one to be reckoned with as carefully as possible in curriculum planning. Unfortunately, what passes as "public opinion" is all too often the opinion of some articulate local minority or some prominent local citizen. Nevertheless, the usual expressions of public opinion through communications to the board of education and school personnel, statements in public meetings, "Letters to the Editor," and the more occasional public opinion polls are very important data for the curriculum planning group.

Many forward-looking curriculum planning groups attempt to sample or otherwise inventory public opinion. Such efforts, if carefully conducted and considered, help set the limitations in which curriculum planning must proceed. Frequently they show that the public is less biased in favor of the status quo than are the professionals! Public opinion data also help the planners in determining next steps so far as the involvement of the public is concerned.

Special-interest Groups. Many special-interest groups in the United States are constantly seeking to affect curriculum choices. Whenever some group wishes to impress its points of view, beliefs, dogmas, and purposes on others, it almost inevitably decides that the school should be requested, aided, or pressured into teaching its doctrines. Accordingly, these groups, most of them probably with the highest and generally worthy motives, work to control curriculum planning through such steps as the passage of laws, petitions to boards of education to adopt certain policies or actions, public statements and news releases, provision of free and inexpensive materials, and personal contacts with teacher groups and individual teachers to urge the use or elimination of certain units of instruction or other curriculum materials.

Whatever the motives and techniques of special-interest groups, they do influence very considerably the work of curriculum planners. Furthermore, in most instances they undoubtedly make significant contributions to the process of curriculum planning. Hence it would seem to behoove each curriculum committee and council to have established, clear-cut channels through which organized groups can present their proposals for curriculum change for consideration. In our American system these groups must be heard, but once their views, aims, and services are understood, the decision whether to use them is one for the curriculum planners.

Authors and Publishers. Textbooks, their authors, and their publishers have a powerful influence in determining what is taught at every level and in every department of the schools. In a 1961 survey of principals' opinions as to the status and prospects of instructional development, the item "textbooks" was rated by both elementary and secondary school principals as the most useful resource in developing the instructional program. In fact, both elementary and secondary school principals indicated that this had been true during the previous five years and was true at the time of the survey (1960–1961). Elementary school principals predicted that the textbook would remain the most useful resource for the next five years, with secondary school principals putting it in second place for that period (curriculum materials prepared by the school faculty going into first place).[19]

American publishers have expended large sums on research and production to develop textbooks, programed instructional materials, teaching machines, and many types of audiovisual aids. Curriculum committees and teachers may select pertinent and useful instructional aids from an abundance of very fine materials. Certainly the curriculum planning group must be aware of the potential influence and usefulness of these resources. In some situations pressures toward curriculum change may emanate from the availability of such materials or aids, whereas in others there may be resistance to curriculum change because of the lack of adequate materials or restrictive policies governing their adoption and use. Thus the professional curriculum staff, to be effective, must have a thorough knowledge of teaching and learning materials.

Critics of Education. Although criticisms of education are as old as formal schooling, since 1950 an avalanche of criticisms has appeared in the public press as well as in educational publications. For example, in the early 1960's such individuals as James Koerner and Vice Admiral Hyman G. Rickover, published highly critical works on education. In his books and articles, James B. Conant, well known in educational circles, has supported some aspects of current education and has found substantial fault with others; such journalists as David Mallery, Martin Mayer, and Fred Hechinger have written many articles dealing with various phases of education, especially the curriculum. In the publications of these and other critics, educators have found much food for curriculum thought. As Earl H. Hanson, a school superintendent and himself an author of several articles in popular magazines about education, stated in a *Saturday Evening Post* article in 1959, "criticism is a hair shirt. It makes us scratch, keeps us from relaxing too comfortably on our laurels."[20]

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[19] See *The Principals Look at the Schools,* pp. 22–25.

Whether the critic be a Rickover, a Conant, an editor of the local newspaper, an informed layman, or even an uninformed layman, the curriculum planning group needs to hear out the criticism. Certainly the group's actions should not be unduly affected by the adverse comments made by local citizens or by the vitriolic articles which may appear in national magazines. Perhaps some curriculum plans have been too largely dictated by negative criticisms. Nevertheless, remediation of curriculum ills inspired by well-founded criticisms and public justification of good practices erroneously challenged by critics frequently strengthen the school program of pupils.

Testing Programs. Although standardized intelligence and achievement tests have been widely used in American elementary and secondary schools beginning in the 1920's, a great increase in their number, utilization, and influence occurred in the 1950's. In 1962 a Joint Committee on Testing of the American Association of School Administrators, the Council of Chief State School Officers, and the National Association of Secondary-School Principals, explained this development in the following words:

> In a cultural area characterized by preciseness of measurement and by rapid advances in the use of mechanical equipment for sorting and classifying data, it is not surprising that renewed emphasis has been placed on testing. The successful use of standardized tests as instruments for measuring various aspects of learning and achievement and as indices of special aptitude and ability has led people to expect results from tests that are beyond the range of purposes they have been created to serve. With almost blind faith in formal testing instruments, the general public, powerful individuals in influential positions, and many members of the teaching profession have strongly advocated the increased use of tests as a means of improving the character and quality of schools. As a consequence, children at almost all age and grade levels are repeatedly given tests during the school year, and external tests are used to an increasing extent as a basis for making scholarship awards and for college admission.[21]

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[20] Earl N. Hanson, "Don't Stop Criticizing Us Teachers," *Saturday Evening Post*, April 11, 1959, p. 25.

[21] Joint Committee on Testing (David B. Austin, chm.), *Testing, Testing, Testing* (Washington, D.C.: American Association of School Administrators, Council of Chief State School Officers, and National Association of Secondary-School Principals, 1962), p. 5.

Also see on the pros and cons of standardized tests, Henry Chauncey and John E. Dobbin, *Testing: Its Place in Education Today* (New York: Harper & Row, Publishers, 1963) and Hillel Black, *They Shall Not Pass* (New York: William Morrow & Company, Inc., 1963).

This committee reported that there were more than twenty national testing programs being administered and there was much evidence that these would continue to grow both in number and in scope. They noted that one test was then being administered to more than 800,000 students, and that another had recently tested 450,000. The committee expressed some fear that the control of the curriculum could result from these extensive testing programs and recommended that "every school system develop an over-all policy governing external tests administered under the auspices of the school."[22]

Curriculum decisions cannot be dictated, we believe, by standardized test data alone. We would reject wholeheartedly such an extension of the use of tests to maintain national scholastic standards as was proposed by Admiral Rickover in the 1962 congressional testimony cited earlier and as further outlined by Alvin Eurich of the Ford Foundation in a 1964 popular magazine article.[23] It must be granted, however, that such a use is already approached in school situations in which it is decided to concentrate on arithmetic, for example, only because the pupils concerned scored below the national norm in the subject. Such data have to be considered by the curriculum planners along with many other types, including the comparison of local arithmetic goals and those of the test makers, the backgrounds of local pupils and of the population on which the norms were based, and needs in arithmetic as compared with those in other curriculum areas.

Curriculum planners certainly need data about pupil achievement in making their decisions as to curriculum needs and achievements. One large area of policy making must deal with curriculum evaluation, including the evaluation of pupil progress. Such a policy should include criteria for the selection and use of tests, and means of helping teachers use tests in the diagnosis of pupils' learning successes and difficulties (see Chapter 11).

Educational Research. The use of research in curriculum improvement is a twentieth-century development, and too few changes in American curriculum practices can be attributed to research. Undoubtedly there will be greater progress in American education after more research has been carried out and its findings in respect to elementary and secondary education have been disseminated.

A considerable portion of the research which has affected educational practice was done in the 1920's and 1930's. Preoccupation with other matters, such as World War II and the subsequent population explosion, tended to diminish the amount of fundamental curriculum research during the 1940's and 1950's. However, a summary of the status of curriculum research for the preceding three years in the concluding chapter of the June, 1963, issue of the *Review of Educational Research* reported that curriculum research "was coming to life again." It was further noted that one's "optimism is aroused most of all by a seeming ground swell of interest in, even beginning of, long-term carefully conducted, curriculum-oriented research studies.[24]

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[22] Joint Committee on Testing, *op. cit.*, p. 30.

[23] Alvin C. Eurich, "Why We Need National Academic Standards," *Parents Magazine & Better Homemaking*, February, 1964, pp. 61, 134–136.

Research affects curriculum decisions in many ways. In the first place, either sound proposals presented for consideration by curriculum planning groups are based on research or they are hypotheses to be tested by actual tryout in the school program. In the second place, those who engage in curriculum planning can do their jobs much more efficiently if they are aware of, or at least review, studies of the available research relating to their ideas for curriculum change. Third, and in a negative way, curriculum planning is frequently adversely affected by the absence of research to justify existing practices. Thus in some situations, criticisms which cannot be answered by definite evidence as to the success and failure of particular practices result in the elimination of these practices. We conclude, therefore, that an adequate group or staff for curriculum planning includes persons with competencies both in reviewing curriculum research and in planning research studies.

Foundations. Private philanthropy, especially through foundations, has supported many fundamental educational improvements. Educational foundations created by large corporations and by individual philanthropists have grown very rapidly in numbers and in resources. A report by the Committee on Foundations of the American Association of School Administrators in 1963 stated that there were then more than 15,000 private philanthropic foundations with total assets of approximately $12 billion, and that each year those foundations dispensed more than $700 million in grants.[25]

Through their support of particular research projects and individual programs within school systems these foundations may have a rather direct influence on curriculum planning. Certainly curriculum planning groups are attracted by the possibilities of financial support for apparently worth-while innovations and experiments. In such cases as the support of educational television by the Ford Foundation an innovation may be widely accepted as generous funds are made available. The idea of joining in a "demonstration" of some educational innovation, or even renovation, with outside financial support is obviously appealing, even though it may distract from other urgent needs, in a school system striving to overcome inertia and inadequate funds. Informed members of curriculum planning groups are aware not only of special programs widely supported by particular foundations but also of worth-while local projects which are inadequately supported.

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[24] William M. Alexander, "Curriculum Planning and Development: A Review of Reviews," *Review of Educational Research,* 33:334 (June, 1963).

[25] AASA Committee on Foundations (Roy M. Hall, chm.), *Private Philanthropy and Public Purposes* (Washington, D.C.: American Association of School Administrators, 1963), p. v.

New and promising curriculum developments may be really assisted by philanthropists seeking to aid such ventures without controlling them. The AASA report concluded its discussion of principles for guiding school systems in the use of foundation funds with the following statement:

> Hopefully, the foundations, in cooperation with school administrators and other educational leaders, will develop a more detailed set of standards for professional practices to be followed by the donors and the recipients of grants. Such criteria would do much to ensure, insofar as is possible, that today's best practice become tomorrow's common practice. If such criteria or ethics are faithfully observed, new truths may be found, more and better educational results secured, and the objectives of a free society more readily safeguarded.[26]

The Educational Profession. The profession of education is itself a force which affects curriculum planning. Although the standards and ethics of the profession are still not fully formulated, the tendencies of the professionals to develop sets of beliefs and practices constitute possible limitations on curriculum development. For example, notions as to formulas for the amount of time to be devoted to curriculum planning and the release of instructional time for this purpose could, if developed far enough, restrict the free operation of curriculum planning groups within local school systems. At the same time and on a more positive note, the convictions of professionals as to the necessity of continuous professional planning can do more than any other single factor to ensure a continuing and purposive process of curriculum planning within educational systems. In fact, in their review of research on the dynamics of change in curriculum development for the June, 1963, issue of the *Review of Educational Research* Klohr and Frymier commented that "significant progress in curriculum development may not be possible until there is a general strengthening of the teaching profession through shifts in the power structure. Clearly research in the dynamics of curriculum change must cope with this kind of problem, however complex it is."[27]

We have noted time and again how the curriculum planners' conceptions of their own work loads and responsibilities come in conflict with what they know is best in curriculum and instruction. Certainly teachers cannot be expected to make plans which make their work more burdensome than is reasonable. Faced with such a dilemma, they should, we believe, operate as professionals to recommend to their administration the best plans they can formulate, and along with the plans an analysis of the needs of the school organization and personnel to put the plans in effect. Thus, a decision not to adopt or try the new plan, if this must be the decision, becomes one of administrative necessity rather than of professional compromise.

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[26] *Ibid.,* p. 43.

[27] Paul R. Klohr and Jack R. Frymier, "Curriculum Development: Dynamics of Change," *Review of Educational Research,* 33:318 (June, 1963).

THE PRODUCTS OF CURRICULUM PLANNING

Perhaps we can best focus on the functions and nature of the process of curriculum planning by reviewing its products. The products of curriculum planning are, obviously, curriculum plans, but plans, too, have products and we see as results of curriculum planning and its decisions, or plans, such tangible items as written curriculum guides and such less tangible but important ones as improved learning opportunities, including changed practices and changed people.

Curriculum Plans

Curriculum planners make many types of advance arrangements of learning opportunities for particular pupil populations. In addition to the over-all plan or organization of the entire program, if there is such a plan, plans are of such diverse types as illustrated below:

School system: Official program of studies (list of courses for which graduation credit is given) of all secondary schools; list of subjects taught in elementary schools, perhaps with some agreement as to time allocations among them; programs of studies for any special groups of pupils; systems of determining and evaluating pupil progress in the curriculum; provisions for any experimental curriculum projects; agreements as to priorities in the content of any curriculum area; curriculum opportunities to be provided cooperatively or otherwise shared between schools; content of educational television programs for in-school use; selection and plans for use of textbooks and other learning resources; and so on.

School: Any of the foregoing plans that curriculum policy places in the decision-making province of the individual school; deviations, experimental or otherwise, from system-wide programs of studies and other curriculum plans; agreements as to all-school programs, projects, emphases; policies for the use of school facilities and resources in the curriculum; nature and schedule of special activities involving relatively small groups of pupils; intramural athletics and other activities; agreements as to placement of curriculum content by area and/or level; organization of instructional groups and schedules; and so on.

Teaching group (grade, department, or team): Any of the above within the province of the group; specific agreements as to scope and sequence of the curriculum areas of concern to each group; priorities in the areas of concern; preparation of resource units; agreements as to individual responsibilities within the group; details of requirements or expectations of pupils, syllabi, bibliographies, worksheets, examinations; and so on.

Individual teacher: Again, any of the above which policy leaves to the individual teacher to decide; year-long, periodic, and daily plans of scope and sequence in the teacher's areas of responsibility; units or blocks of work; materials for pupils' use; and so on.

Curriculum Guides

Most curriculum plans developed by state and local school systems are ultimately put in written form, thus becoming curriculum guides. The many thousands of such guides in printed or mimeographed form can be roughly classified as follows:

General Statements. Many school systems and even individual schools find it desirable to prepare statements of their philosophy and program of education. Such general guides usually contain one or more of the following types of materials: philosophy and objectives; scope and sequence of learning opportunities, usually organized by subject fields; suggestions for organizing instruction; policies relating to the curriculum.

Courses of Study. Most curriculum guides deal with the content of the curriculum areas. For the elementary school and much less frequently for secondary schools and in combined elementary-secondary presentation, these guides may indicate suggestions for organizing instruction in all curriculum areas. Many guides deal with a particular field for all levels of its instruction, although separate courses of study for each secondary school subject are quite common. Frequently the guides are prepared for primary, intermediate, junior high, and senior high school years. The nature of these guides varies from very prescriptive outlines of content to be taught and minimum essentials to very general suggestions to teachers as to possible guidelines for selecting content and organizing instruction.

Specific Teaching Aids. Although the better courses of study are usually replete with specific suggestions as to materials and techniques, many publications focus on aiding teachers in particular ways. Thus resource units (see Chapter 13) may be made available for helping teachers plan their own units of work with reference to some broad curriculum topic or theme. Detailed listings of materials, especially audiovisual ones, and guides to community resources are frequently provided. General guides to teaching, with specific suggestions on many teaching responsibilities, are also issued by some state and larger local systems.

Descriptions of Practice. Any of the above types of curriculum guides may contain descriptions of practice within the school system, but some systems also publish bulletins wholly devoted to describing curriculum opportunities and teaching practices in these systems. Although frequently directed primarily to parents and the general public, such bulletins also serve useful purposes in helping the teachers who prepare them and others who read them develop common concepts about the school program.

Undoubtedly some curriculum guides are not put to good use, but we would not eliminate the important process of preparing guides because of faulty procedures or poor products in some situations. The growth that can come from cooperative work by school personnel in developing guides is perhaps one of the major reasons for maintaining the production of these materials. Furthermore, good guides, well planned and well written, can be of much direct assistance to school personnel. We suggest the following considerations for their development:

1. The organization for curriculum planning should provide for as wide participation as possible in developing ideas and making of decisions to go into curriculum guides, but the writing itself should be concentrated in a few people, generally under the supervision of the curriculum director (see Chapter 15).
2. Each guide should clearly indicate its intended use. Generally, there are two uses by professional school personnel: (a) orientation and reference with respect to the total curriculum and the curriculum policies of the school system; and (b) specific guidance of teachers in planning instruction.
3. Guides to be used for either of the purposes just listed should be consistent in point of view; specifically, they should help all who read and use them understand better the school program and the possibilities of their own relationship to it.
4. Guides written to give specific help to teachers should suggest a wealth of possibilities from which the teacher derives ideas for exploration in his own situation. The presentation of suggestions should be in such form as to aid the teacher in understanding and evaluating them, and also so as to make very clear that it is the teacher's responsibility and opportunity to make the best plan possible for his situation.
5. The guides should be attractive in format, clear in presentation, and so arranged as to facilitate teachers' use for reference purposes. For the more specific types of guides, a loose-leaf notebook arrangement is probably preferable so that the teacher can insert additional materials. Tabs, paper of different colors, and other mechanical aids are very helpful.
6. Most general guides are probably best used as bases of discussion. Accordingly, such characteristics as brevity, cogency, and specificity of issues and positions are desirable. References to other sources for further study, and even questions for discussion may be useful in

materials which are likely to be discussed in parent or teacher study groups and in faculty meetings.

Changed Practices

The immediate goal of curriculum plans and guides is changed practice in the school and classroom. Changes in practice occur as teachers attempt to try procedures in which they have become interested and have learned to understand through their participation in curriculum planning or use of curriculum guides. The new practice may be as minute as the use of a new teaching aid or as comprehensive as a total reorganization of instruction in a particular area. But the tangible, observable product of curriculum planning which teachers and pupils recognize is a change in the content or process of a learning situation. Whether or not the new practice is better than the old is a matter of evaluation, and this is a matter of great importance. But adequate planning in the first place is itself the best guarantee of the quality of the change in practice. When problems are carefully identified, solutions thoroughly searched out, and changes then agreed upon for tryout, the changed practice becomes both a result and a criterion of curriculum planning.

Changed People

Changes in pupil behavior represent the ultimate product of curriculum planning, and we devote much of our material on curriculum determinants in Parts II and III to the goals and processes of effecting these changes. Here we should also note that an important product of curriculum planning can be the changes in attitudes and motivations of teachers. We heartily accept Alice Miel's classic thesis that curriculum change is "a type of social change, change in people, not mere change on paper."[28] Certainly the increased understanding of the curriculum and of the teaching and learning which generally accrue from systematic curriculum planning operations are important products which almost in themselves justify the process. Teachers who are themselves becoming more knowledgeable, more skillful, and more dynamic can serve increasingly effectively as agents of change for their pupils. Hence changes in pupils and in teachers are inextricably related as ultimate products of the process of curriculum planning.

FOR FURTHER STUDY

ANDERSON, VERNON E. *Principles and Procedures of Curriculum Improvement.* 2nd. ed. New York: The Ronald Press Company, 1965.

See in this comprehensive text on curriculum improvement Parts I,

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[28] Miel, *op. cit.*, p. 10.

"Dynamics of Curriculum Improvement," and II, "Planning and Organizing for Curriculum Study."

Beauchamp, George A. *Curriculum Theory.* Wilmette, Ill.: The Kaag Press, 1961.

An analysis of the status of curriculum theory, and suggestions for further theory building. Attempts to relate various aspects of a theory of the curriculum and curriculum planning.

Brickell, Henry M. *Organizing New York State for Educational Change.* Albany: New York State Department of Education, 1961.

A study of the influence of state agencies and organizations on local programs of instruction and the decision-making process within the public schools. Presents a detailed plan for improvement in the organization and coordination of efforts at the state level further to assist local curriculum planning and development in New York State.

Conant, James Bryant. *Shaping Educational Policy.* New York: McGraw-Hill Book Company, Inc., 1964.

Proposes strengthening of state leadership and cooperation in education, with the establishment of a compact for the creation of an "Interstate Commission for Planning a Nationwide Educational Policy." Conant argues that existing policy-making arrangements are inadequate and emphasizes the need for interstate cooperation and new leadership groups.

Doll, Ronald C. *Curriculum Improvement: Decision-Making and Process.* Boston: Allyn and Bacon, Inc., 1964.

Chapter 1 presents a brief historical review of curriculum development with identification of major trends and recurring issues. Other chapters deal with the bases of decision, the process of curriculum development, and evaluation of existing programs. Situations for case study are included.

Frazier, Alexander, ed. and chm. *New Insights and the Curriculum.* 1963 Yearbook of the Association for Supervision and Curriculum Development, National Education Association. Washington, D.C.: The Association, 1963.

This yearbook is developed through paired papers: one on new insights from other disciplines; the other on the curriculum implications of these insights. The areas treated are potentiality, knowledge, self-management, relationships, cross-cultures, citizenship, and creativity.

Hanna, Paul R. "Proposed—A National Commission for Curriculum Research and Development," *Phi Delta Kappan,* 42:331–338 (May, 1961).

Recommends a national commission as an important means of preservation and advancement of our society. Outlines specific procedures for the commission's establishment, and membership selection on a continuing basis from the ranks of scholars, laymen, and school personnel.

Heath, Robert W., ed. *New Curricula.* New York: Harper & Row, Publishers, 1964.

Reports of the development of selected national curriculum projects. See especially Chapter 5, "The Requirements for Major Curriculum Revision," for an analysis of curriculum change presented by Zacharias and White.

Huebner, Dwayne, ed. *A Reassessment of the Curriculum.* New York: Bureau of Publications, Teachers College, Columbia University, 1964.

Contains nine papers presented at a conference at the Teachers College Curriculum Conference of November, 1963. The authors examine the curriculum in the light of past experience, current realities, and future aspirations.

Klohr, Paul R., and Jack R. Frymier. "Curriculum Development: Dynamics of Change," *Review of Educational Research*, 33:304–321 (June, 1963).

Discussion of the search for models, the diffusion of innovations, the utility of field demonstrations, the nature of change, and role perception and personality in change.

Miel, Alice. *Changing the Curriculum: A Social Process*. New York: Appleton-Century-Crofts, Inc., 1946.

A fundamental, pioneer analysis of curriculum change as a social process at the local community level. Advances the thesis that curriculum change is change in people.

Miles, Matthew B., ed. *Innovation in Education*. New York: Bureau of Publications, Teachers College, Columbia University, 1964.

Challenges many conventional beliefs about the nature of educational change. Thirty-four authors, including educators, sociologists, and psychologists, contributed the material included. Generalizations formulated in individual chapters are reviewed and discussed by the editor in a significant final chapter.

National Education Association Project on Instruction. *Deciding What to Teach*. Washington, D.C.: The Association, 1963.

Discussion of various issues in curriculum decision making. See especially Chapter 7, "Who Should Make What Curriculum Decisions," and chapter 8, "What to Teach—A Continuing Inquiry."

———, *Schools for the Sixties: A Report of the Project on Instruction*. Washington, D.C.: The Association, 1963.

Official summary of material found in three supporting reports of the Project on Instruction: *Deciding What to Teach, Planning and Organizing for Teaching,* and *Education in a Changing Society*. Instructional problems are identified, recommendations and explanatory discussion included. See Appendix A for the recommendations of the National Committee.

Passow, A. Harry, ed. *Curriculum Crossroads*. New York: Bureau of Publications, Teachers College, Columbia University, 1962.

Papers presented at the Teachers College Curriculum Conference in 1961. See pages 11–21 for development of a proposal for establishment of state curriculum evaluation commissions, and pages 75–86 on the "dynamics and politics of curriculum change."

Rickover, Vice-Admiral H. G., u.s.n. *American Education—A National Failure*. New York: E. P. Dutton Co. Inc., 1963.

A critique of American education by one of its most persistent critics. Mostly a reprint of congressional testimony, the volume includes the author's proposal for the establishment of a National Standards Committee and its function.

Taba, Hilda. *Curriculum Development: Theory and Practice*. New York: Harcourt, Brace & World, Inc., 1962.

A comprehensive and detailed treatise of the total field of curriculum and cognate areas. Of particular interest is Part 4, in which the author presents her model for curriculum design, and designates the classroom teaching-learning unit as the foundation of curriculum change.

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[illegible] American Education [illegible] New York: [illegible]

A critique of [illegible] author's proposals for the [illegible]

[illegible] Harcourt, Brace & World, Inc., [illegible]

[illegible] curriculum [illegible]

PART 2

THE DETERMINANTS OF THE CURRICULUM

CHAPTER 2

Pupils as a Determinant of the Curriculum

As we continue our consideration of the process of curriculum planning, we find relevant the classic statement John Dewey made in 1902, identifying two of the factors listed in the model in Figure 1 as the most basic of all considerations in curriculum planning:

> The fundamental factors in the educative process are an immature, undeveloped being; and certain social aims, meanings, values incarnate in the matured experience of the adult. The educative process is the due interaction of these forces. Such a conception of each in relation to the other as facilitates completest and freest interaction is the essence of educational theory.[1]

An adequate, comprehensive curriculum for boys and girls can be planned only by taking fully into account all the pertinent aspects of these two basic components of the educational process—the learners and the social group that provides the schooling. In this and the next chapter, we will consider these factors in detail, analyzing them as curriculum determinants, and describing the processes by which account is taken of pupils and society in educational planning.

THE PLACE OF THE INDIVIDUAL IN AMERICAN SOCIETY

In discussing curriculum planning for schools in the United States, it is highly proper that we first consider the pupil. An individual, per se, is of paramount importance in the American ethic. Obviously, a person is a member of a social group, and his welfare, happiness, and behavior depend on the character and nature of the social relationships and the agencies of which he is part; nevertheless, the democratic society of which the American child is a member has developed its ethics and its social and institutional arrangements on the basis of the dignity and worth of each individual. From the earliest years of the settlement of this continent the American people have given expression to this belief.

Tocqueville, in his renowned analysis of democracy in the United States, accepted this basic social concept of the equality of man as the one great ideal that conditioned American life and institutions:

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[1] John Dewey, *The Child and the Curriculum* (Chicago: University of Chicago Press, 1902), pp. 7–8. Excerpts from this volume are reprinted with the permission of University of Chicago Press.

> Among the novel objects that attracted my attention during my stay in the United States, nothing struck me more forcibly than the general equality of condition among the people. I readily discovered the prodigious influence that this primary fact exercises on the whole course of society. . . . The more I advanced in the study of American society, the more I perceived that this equality of condition is the fundamental fact from which all others seem to be derived and the central point at which all my observations constantly terminated.[2]

The institutions of government, the laws of the land, the constitutions of the federal and state governments, the structure of social agencies, the conditions of economic life—all are designed to promote the welfare and foster the perfectability of the individual. The enhancement of the individual is the basis for our corporate and group action. Mason states that "human worth, not the illusion of security and freedom from change, remains the heart and soul of our individualism. The basic test of any institution is still whether it values man as man and not as a machine."[3]

Although civilization has become exceedingly complex in recent decades, principally because of the contributions of technology to living conditions throughout the world, the primacy of the individual is still the basic consideration in the social and political arrangements and institutions of the nation. Sir Oliver Franks, at the time Ambassador from Great Britain to the United States, in discussing the threats to the Western world, said:

> We know what are the fundamental simple ideas, the elemental values by which we, our traditions and our institutions, have been formed. They are very simple things, like the worth and dignity of the individual human life; the freedom of the individual in thought and in action; the idea of respect for other individuals and the right of all to justice before the law; the idea that in society the individuals who compose it have rights and duties toward each other so that the freedom of each is limited only by the proper amount of freedom accorded to the other. These are the ideas on which the western tradition is built. . . .[4]

In a poignant discussion of American life and institutions in a trying period of our history, Agee and Evans expressed a people's eternal hope for the future: "In every child who is born, under no matter what circumstances, and no matter what parents, the potentiality of the human race is born again: and in him, too, once more, and of each of us, our terrific responsibility toward human life; toward the utmost idea of goodness, of the horror of error, and of God."[5]

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[2] Alexis de Tocqueville, *Democracy in America* (New York: Alfred A. Knopf, Inc., 1951; originally published in France in 1835), I, 3.

[3] Alpheus T. Mason, "American Individualism: Fact and Fiction," *American Political Science Review,* 46:17 (March, 1952).

[4] Sir Oliver Franks, "The Challenge of Our Times," *Modern Education and Human Values* (Pitcairn-Crabbe Foundation Lecture Series; Pittsburgh: University of Pittsburgh Press, 1950) III, 96–97.

The schools, as one of our principal social instrumentalities, must and do embody in their policies, structures, programs, and practices this fundamental concern for the development of the individual. Education is the best process for preserving and extending the worth and dignity of the individual. The establishment of schools is society's principal method for enhancing the status of each individual in all his potentialities.

It is obvious that the individual must achieve his potentialities in a social group; hence, by emphasizing the importance of the individual in the American culture, we are not minimizing the importance of a person's social relationships nor his obligation to contribute to the attainment of perfectability by other members of the society. Chapter 3 will consider the social obligations of the schools, but it should be emphasized here, and throughout this book, that the highest fulfillment of the democratic traditions of this country is only possible through the exaltation of the individual.

The history of education in this country depicts the ceaseless struggle of its people to provide equality of educational opportunities to all children and youth. Their efforts to establish a system of schooling that would assure each child the opportunity to develop to the fullest extent possible his talents, abilities, and capacities is a thrilling part of the traditions of America. But the battle has not yet been won; much still must be done to devise institutional arrangements and to carry out an educational program that exemplifies fully the concept of enhancing the worth and dignity of each boy and girl. We Americans still must improve our educational structure, expand and extend our educational program, broaden our educational policies, and improve our school practices before all the children of all the people will have the opportunity to develop to the maximum their potentialities and capabilities.

WHY MUST THE CURRICULUM PLANNER TAKE ACCOUNT OF PUPILS?

It is appropriate to summarize here the principal reasons pupils constitute a fundamental consideration in curriculum planning.

1. *The maximum development of each individual, within the framework of the common welfare, is the essence of democracy and, hence, of schooling.* This article of democratic faith has characterized our culture from colonial times. It is expressed in the great documents of our history and enunciated in the writing of our great statesmen and philosophers.

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[5] James Agee and Walker Evans, *Let Us Now Praise Famous Men* (Boston: Houghton Mifflin Company, 1941), p. 289.

John Stuart Mill, in his famous essay on liberty, states this concept, which also epitomizes the American view, fully:

> It is not by wearing down into uniformity all that is individual in themselves, but by cultivating it, and calling it forth, within the limits imposed by the rights and interests of others, that human beings become a noble and beautiful object of contemplation. . . . In proportion to the development of his individuality, each person becomes more valuable to himself, and is therefore capable of being more valuable to others.[6]

2. *A person is truly educated only as he develops to the fullest extent possible his unique talents and capabilities.* Education, as contrasted with training, is the most complete development of the individual in all his human potentialities.[7] Teachers educate the immature only as they enable them to use intelligence creatively, to acquire knowledge essential for facing the problems of the individual and of society, to advance knowledge, to create the beautiful, to exercise insight, to maintain one's health and well-being, to formulate sound judgments—in short, to be a human being.

3. *The welfare and advancement of the social group depend on the maximum development of the human potentialities of each member comprising the group.* The very survival of a society of persons, particularly in the modern technological age, is dependent in a large measure on contributions which each member can make to the welfare of the group and on the extent to which he exemplifies the highest measure of group morality and group sensitivity.

John Stuart Mill, again, states that "the worth of a State, in the long run, is the worth of the individuals composing it . . . a State which dwarfs its men, in order that they may be more docile instruments in its hands even for beneficial purposes—will find that with small men no great thing can really be accomplished. . . ."[8]

More recently, the widely acclaimed report of the Rockefeller Brothers Fund, *The Pursuit of Excellence,* stated that "the greatness of a nation may be manifested in many ways—in its purposes, its courage, its moral responsibility, its cultural and scientific eminence, the tenor of its daily life. But ultimately the source of its greatness is in the individuals who constitute the living substance of the nation."[9]

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[6] John Stuart Mill, *On Liberty and Considerations on Representative Government* edited with an introduction by R. B. McCallum (New York: The Macmillan Company, 1947), pp. 55–56.

[7] A challenging discussion of human potentialities and their fulfillment is Gardner Murphy, *Human Potentialities* (New York: Basic Books, Inc., 1958).

[8] Mill, *op. cit.,* p. 104.

[9] Rockefeller Brothers Fund, *The Pursuit of Excellence: Education and the Future of America,* Panel Report V of the Special Studies Project (New York: Doubleday & Company, Inc., 1958), p. 1.

4. *The nature of our nation in years to come depends on the skills, insights, knowledge, and character of the individuals who will comprise that society.* The future of America is in the hands of the children and youth of today. The present generation can establish social agencies and institutions, can utilize the resources of the nation to provide a high standard of living, can foster the type of human relationships that enrich life, can accumulate individual and corporate wealth, but it is only as each succeeding generation is capable of managing and improving these instrumentalities and relationships that it is a "self-renewing" society, that the citizens of a complex world may enjoy life's rewards. It is Gardner's contention, in his brilliant essay on the renewal of a society, that "social renewal depends ultimately on individuals. . . ."[10] To achieve this objective we must "develop skills, attitudes, habits of mind and the kinds of knowledge and understanding that will be the instruments of continuous change and growth on the part of the young person. Then we will have fashioned *a system that provides for its own continuous renewal.*"[11]

The Committee for the White House Conference on Education, in reporting the results of the 1955 Conference to President Eisenhower, believes that "from the work of the Committee for the White House Conference on Education, one fundamental fact emerges: schools now affect the welfare of the United States more than ever before in history, and this new importance of education has been dangerously underestimated for a long time."[12]

Some may suggest that there is an antithesis between the maximum development of the individual and the advancement of the welfare of the state, or, as we more recently refer to this side of the coin, national need and purpose. This appears to be a false antithesis, although it is possible that in a dire national emergency, during war or peace, national need may require a channeling of individual development so that the nation itself survives. Generally, however, national welfare is promoted handsomely by the maximum development of all the individuals comprising the society. The members of the society will determine the nature and direction of individual development, lest the society itself be destroyed by its own dereliction, but within this general control, diversity, creativeness, invention, and innovation are to be encouraged.

5. *The motivational syndrome of the individual himself—his drives, his needs, his perceptions, his self-concepts, his expectations, and his aspirations—constitutes one of the primary bases for the selection and development of learning experiences in the school program.* All learning is the product of behavior, of a response on the part of the learner. All behavior

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[10] John W. Gardner, *Self-Renewal: The Individual and the Innovative Society* (New York: Harper & Row, Publishers, Inc., 1964), p. xiv.

[11] *Ibid.*, p. 21.

[12] The Committee for the White House Conference on Education, *A Report to the President* (Washington, D.C.: Government Printing Office, 1956), p. 4.

is goal-directed: it has purpose and an end-in-view. Thus motives become the primary factor in determining the nature and character of the learning attained from an experience in which the learner participates. Teachers and other curriculum planners must know a great deal about children so that they may select and develop learning experiences that will have meaning and significance for the pupils.

6. *The program of the school and the learning experiences selected for pupils at all levels must be adapted to the maturity, capacities, and abilities of the learners.* We would not select a monotone, with no musical ability, to sing the lead part in the school operetta. Neither would we require a class of fourth-graders to write essays on the constitutional issues involved in the regulation of television broadcasts. Similarly, it is unreasonable to expect a seventeen-year-old high school student who reveals a low level of ability to read and comprehend printed material, and who scores low on tests of ability, to do abstract thinking or to write themes in impeccable English in an eleventh-grade English class.

On the other hand, if a teacher finds that a twelve-year-old pupil has an interest in undertaking an intricate and complex project in electronics, he most certainly would want to provide an opportunity for this pupil to carry on his project under the direction of the school. A third-grade pupil who is reading a book each week from the school library should not be asked during the language arts class period to read from the school-adopted text about Bill and Jane's trip to the zoo.

Traditional methods of curriculum planning and teaching that provided a uniform set of common learning experiences for all the pupils of a particular group are not acceptable in today's school. Much of the experimentation that has been carried on by school systems and many of the new administrative policies and arrangements adopted in recent years are designed to make it possible to individualize learning experiences for each boy and girl enrolled in the school. Ungraded elementary school units, team-teaching plans, track programs, grouping practices, advanced placement programs, honors programs, classes for exceptional children, and a host of other recent innovations in instruction and administration illustrate these efforts.

7. *Evaluation of the pupil's growth and development and the extent of his attainment of the behavioral goals of education must take account of his own capacities, abilities, talents, and potentialities.* Only by evaluating the extent to which each child achieves the outcomes deemed desirable by those who plan the curriculum can educators determine the effectiveness of the school's program and the appropriateness of the learning experiences provided pupils. Two sets of conditions are necessary in evaluation: concepts of what is good, what is desirable, what constitutes the goals of living; and the potentialities of each individual being educated. Appraisal of the educational program must take proper account of both these aspects of schooling. Achievement is individual.

THE CHILD AND THE SOCIETY

These, then, constitute the principal reasons why teachers, administrators, and others concerned with curriculum planning must take account of the pupil as a factor in the educative process. Obviously, it is impossible not to consider him, but the degree to which the characteristics of each child are a determinant of the educational experiences provided by the school is a basic issue in curriculum planning. Our schools of a half century ago tended to ignore the interests, needs, motivations, capacities, abilities, talents, and aspirations of their pupils. The demands of the culture were paramount; the adult members of the society insisted that the designated "subjects" be learned, and that pupils must conform, regardless of personal factors, or discontinue their schooling.

The ultimate reaction to this policy of a rigid curriculum, uniform methods of teaching, and application of common standards led to excesses of the opposite sort. During the heyday of the "child-centered" movement in education during the second quarter of this century, some of those who regarded the pupil as the principal if not the only factor to be considered in planning a curriculum largely sought to ignore any rights the society might have in determining the nature of the school's program. Fortunately, these views were never carried out fully in any school, and extreme versions of the child-centered curriculum were attempted in only a few experimental schools or in an occasional classroom of a misguided teacher.

In most schools, even during this period of experimentation in developing a more child-centered approach to planning, and in all schools in which responsible curriculum planners are in charge today, a more or less desirable balance between the two basic factors in the educative process is maintained. No educator now defines as a curriculum issue the child versus the subjects, or the individual versus the culture. Both factors must be fully recognized. A few ardent advocates of one point of view or the other still stubbornly refuse to face reality and argue for an invalid emphasis on either the child or the adult society as the basic consideration in educational planning, but these people have little impact on the school program.

Dewey, in his classic analysis more than a half century ago, discussed the controversy fully and insightfully. Inasmuch as he has served as the "whipping boy" for the outspoken critics of the child-centered aspect of planning or as the authority for its fanatical supporters, most of whom revealed a colossal ignorance of what Dewey really advocated, it seems desirable at this point to quote rather extensively from his own statement on the issue:

> From these elements of conflict grew up different educational sects. One school fixes its attention upon the importance of the subject-matter of the curriculum as compared with the contents of the child's own

> experience. It is as if they said . . . subject-matter furnishes the end, and it determines method. The child is simply the immature being who is to be matured; he is the superficial being who is to be deepened; his is narrow experience which is to be widened. It is his to receive, to accept. His part is fulfilled when he is ductile and docile.
>
> Not so, says the other sect. The child is the starting-point, the center, and the end. His development, his growth, is the ideal. It alone furnishes the standard. To the growth of the child all studies are subservient; they are instruments valued as they serve the needs of growth. Personality, character, is more than subject-matter. Not knowledge or information, but self-realization, is the goal.[13]

Does Dewey's analysis of the conflict between the two extreme points of view sound familiar? His own views are clearly stated in the remainder of the essay:

> The need of getting theory and practical common-sense into closer connection suggests a return to our original thesis: that we have here conditions which are necessarily related to each other in the educative process, since this is precisely one of interaction and adjustment. . . .
>
> Abandon the notion of subject-matter as something fixed and ready-made in itself, outside the child's experience; cease thinking of the child's experience as also something hard and fast; see it as something fluent, embryonic, vital; and we realize that the child and the curriculum are simply two limits which define a single process. Just as two points define a straight line, so the present standpoint of the child and the facts and truths of studies define instruction. It is continuous reconstruction, moving from the child's present experience out into that represented by the organized bodies of truth that we call studies.[14]

Dewey continues to scold the "either-or" educators:

> It will do harm if child-study leaves in the popular mind the impression that a child of a given age has a positive equipment of purposes and interests to be cultivated just as they stand. Interests in reality are but attitudes toward possible experiences; they are not achievements; their worth is in the leverage they afford, not in the accomplishment they represent. . . .
>
> If, once more, the "old education" tended to ignore the dynamic quality, the developing force inherent in the child's present experience, and therefore to assume that direction and control were just matters of arbitrarily putting the child in a given path and compelling him to walk there, the "new education" is in danger of taking the idea of development in altogether too formal and empty a way. The child is expected "to develop" this or that fact or truth out of his own mind. . . . Nothing can be developed from nothing; nothing but the crude can be developed out

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[13] Dewey, *op. cit.*, pp. 11–13.

[14] *Ibid.*, pp. 15–16.

of the crude—and this is what surely happens when we throw the child back upon his achieved self as a finality, and invite him to spin new truths of nature or conduct out of that.[15]

TABLE 1

Factors about Children and Youth That Should Be Taken into Account by Curriculum Planners

TYPES OF INFORMATION NEEDED

A. Pupil population
  1. Enrollment and enrolment trends
  2. Classification of school pupils by sex, age, and grade level
  3. Retardation and acceleration of pupils from normal progress
  4. Retention rates until graduation; changes in rates in recent years
  5. Age and grade level of dropouts
  6. Characteristics of pupils who drop out
  7. Continuation of graduates into college or postsecondary programs
  8. Characteristics of graduates who enter college
  9. Marriage rates for school-age youth
  10. Mobility of school-age population
  11. Projected population of school districts
  12. Composition of population by age groups
  13. Estimated changes in future years of retention rates and rates of admission to college
  14. Projected future enrollments by year and grade level
  15. Enrollments and projected enrollments in noncollegiate educational programs for adults

B. Growth and developmental characteristics and status
  1. Characteristics of growth and development from infancy to adulthood
    a. Physical
      1) Bodily development
      2) Motor skills
      3) Physical abnormalities
      4) Health status
    b. Emotional and social
      1) Emotional status—worries, fears, anxieties
      2) Interpersonal relationships
      3) Family relationships
      4) Heterosexual relationships
      5) Social and emotional maladjustments
    c. Intellectual
      1) Readiness for various types of learning
      2) Language development
      3) Ability to reason and think abstractly
      4) Growth in capacity to learn
  2. Developmental tasks of children and youth
  3. Psychobiological needs of children and youth
  4. Interests, problems, and concerns of children and youth

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[15] *Ibid.*, pp. 20–24.

C. Personal traits, character, and personality
  1. Concepts of self
  2. Values, beliefs, and ideals
  3. Morals and behavior patterns
  4. Attitudes
  5. Aspirations, plans, vocational choices
  6. Motivations, drives, needs

D. Abilities, talents, potentialities, and achievements
  1. Capacity for intellectual endeavors
  2. Creativeness
  3. Talents
  4. Patterns of intellectual development
  5. Exceptional needs of children with atypical characteristics
  6. Achievements in educational endeavors

E. Home, family, and community conditions
  1. Socioeconomic status of the family
  2. Cultural and intellectual climate of the home
  3. Aspirations of the family
  4. Occupations of the parents
  5. Social, cultural, and economic characteristics of the neighborhood
  6. Characteristics of the peer culture
  7. Educational level of the adults of the community
  8. Out-of-school jobs and summer jobs
  9. Characteristics of the labor force
    a. Distribution by types of occupations, locally and nationally
    b. Trends in employment by types of occupations
    c. Projected trends in the demands for workers in various types of occupations

F. The learning process
  1. The nature of learning
  2. Learning theories
  3. Factors conducive to learning
  4. Motivation, perception, and self-concepts in learning

INFORMATION ABOUT PUPILS NEEDED BY CURRICULUM PLANNERS

Obviously those who plan the curriculum must have a great deal of information about the individual children for whom an education is being provided. Table 1 lists what we consider to be important bodies of information that should be utilized in planning a curriculum for a particular group of pupils, a local school system, or a state system of schools. The list is extensive, but children are complex human beings, and no essential item of information should be neglected.

The items are not discrete categories. They only state the various kinds of analysis and the types of information necessary for valid planning.

OBTAINING INFORMATION ABOUT PUPILS

In curriculum planning it is necessary for educators to have information about each individual child for whom schooling is planned, but they also need broad generalizations and concepts about children and youth in general. Curriculum planning cannot be provincial, although it should be individualized.[16]

In our discussion of methods by which educators may obtain pertinent information about children and youth, suggestions will be given when appropriate for making studies of pupils on a national scale, on a state basis, on a community basis, on a school basis, and individually. The sources of information described here and the methods of gaining information about pupils are certainly not exhaustive. It would not be feasible in this book to describe in detail, for example, the methods of child study or to explain the nature of demographic research; but we shall suggest the sorts of things that individual teachers, school faculties, administrative and staff personnel of school systems, and research divisions of state departments of education may do to gather information needed by the curriculum worker as he plans learning experiences for each pupil collectively and individually.

Pupil Population

The two most important sources of data on school population are the United States Bureau of the Census and the United States Office of Education. The Bureau of the Census makes comprehensive studies of school enrollment, school attendance, grade level, and level of schooling completed for the United States as a whole, as well as for each state and its political and demographic subdivisions. These data are tabulated on the basis of such factors as sex, age, race, place of residence, and income. In addition to the decennial census, during the interim the Bureau also makes periodic estimates and projections of school enrollment and related data, and of the total population, classified by age groups. Other census data, such as migration, income, housing, and the like, are pertinent to educational planning.

The Office of Education collects and publishes data on school enrollment, grade distribution, and related matters. The Bureau of the Census obtains its information from individual enumerations; the Office of Education, from reports submitted by local school officials to state departments of education. The reports of both agencies are essential sources of information for the study of pupil population in many of the aspects listed in Section A of Table 1.

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[16] An excellent example of a study of many important characteristics of the youth of a community is the work of the Committee on Human Development of the University of Chicago, Robert J. Havighurst and others, *Growing Up in River City* (New York: John Wiley & Sons, Inc., 1962).

Some other government agencies also publish studies that on occasion are useful to the curriculum worker. The Department of Labor issues reports and studies from time to time on the manpower situation, trends in demands for persons in various occupations, composition of the labor force, changes in employment, unemployment, and the relation of education to it, projected increases in the labor forces in future years, young workers, and the like. The Manpower Development and Training Act, passed by Congress in 1962, requires the President to report annually on the manpower situation. These reports are valuable sources of data.[17] The National Science Foundation has issued some studies of the demand for and supply of scientific personnel; special committees created by government agencies have also made reports on manpower needs of interest to the educator. The committee in charge of the White House Conference on Children and Youth, which has been convened each ten years since the first decade of this century, has published informative studies of the status of children and youth in the nation.

Some national voluntary organizations also publish studies on pupil population of significance in curriculum planning. Special mention should be made of such reports by the National Education Association, particularly as a part of its Project School Dropouts, initiated in 1961.

At the state level, the state departments of education are officially responsible for the collection and publication of data on pupil population in their respective states. These data are usually published annually. Many of the state departments of education also conduct research studies of certain aspects of pupil population factors, rates of dropout and of college attendance, pupil mobility, age-grade distributions, and the like. State bureaus of vital statistics publish figures on births, deaths, marriages, divorces, and other demographic data.

Occasionally, a state will create an educational survey commission to study its educational problems and developments. Reports of such study groups are valuable sources of data on educational statistics. In some instances useful information may also be gleaned from research studies by professors, graduate students, educational associations, or similar groups.

Curriculum planning, however, as noted in Chapter 1, is primarily a local responsibility. Its educational program is planned by each school district and by each school. If we are to foster the maximum development of each individual child, curriculum planning necessarily must eventually be individual, although broad patterns and designs may be established for a local or state system of schools. Studies of pupils, individually and collectively, therefore must be made by local school officials and by teachers in each classroom. Information on all the fifteen items listed in this category in Table 1 will need to be gathered for individual schools of a community, and then *in toto* for all the schools of the local system. For example, it is absolutely essential that local school officials make reliable projections of the enrollment in the schools of the district for the immediate years ahead; otherwise, enough classrooms may not be available when needed, and enough teachers may not be employed for the ensuing school year, or, contrariwise, decreases in enrollments may not be foreseen, and money may be wasted on needless expenditures. Also, books and supplies will need to be available in the quantities needed. These are all matters of concern to any curriculum worker.

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[17] The President of the United States and the United States Department of Labor, *Manpower Report of the President* and *A Report on Manpower Requirements, Resources, Utilization, and Training*, March, 1963, March, 1964, and March, 1965 (Washington, D.C.: Government Printing Office, 1963, 1964, and 1965).

The extent to which pupils graduate from high school is essential information for secondary school planners. In one high school of a city the rate may be 92 percent, but in another it may be only 65 percent. This fact has a bearing on the curriculum planned for each school. Correlatively, the percentage of graduates who enter higher institutions of learning must be known. And so it is for all the items listed in Table 1. Types of studies which individual school faculties and central office personnel should make are indicated by the items listed there. Most schools have made some such studies, and educators generally are familiar with the techniques and procedures used. However, those who wish to benefit from the experience of other school systems can find numerous examples of good pupil population studies, particularly follow-up, holding power, retention, and retardation and acceleration studies.[18] Advice may also be obtained from the guidance division of state departments of education and from professors of guidance and counseling in colleges and universities. The canons of research and proven techniques of study should be observed by those who direct such investigations; otherwise, money and effort will be wasted, and, most serious of all, erroneous conclusions about pupils may be reached.

Growth and Developmental Characteristics

Fortunately for the educator, the literature on the learner is voluminous. Rows of university library shelves are weighted down with research reports, monographs, magazine articles, scholarly works, and textbooks on many aspects of human growth and development. Motion-picture films, filmstrips and other visual material as well as general treatises, particularly textbooks written for teachers, are available in abundance. A problem facing curriculum workers is to keep abreast of the literature, and to organize it into a usable body of concepts and principles pertinent to curriculum planning. Most teachers have learned something about the subject in their undergraduate and graduate courses in human growth and development and related psychological topics, and are able to understand the implications of new findings and theories.

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[18] The Los Angeles City School Districts, through their Research Section, prepare a number of research reports on pupil population matters. See also St. Paul Public Schools, *Second Dropout Study* (St. Paul: The Schools, 1961) and Dade County (Florida) Public Schools, *Dropout Study: Two Year Report*, Sept. 20, 1960–Sept. 17, 1962 (Miami: The Schools, 1963), for examples of a thorough study of dropout in city school systems.

The Illinois State Superintendent of Public Instruction has published an excellent guide for the study of potential dropouts: *Procedures for the Identification of Potential High School Dropouts* (Springfield: The Superintendent, 1962).

A good source of information is the Children's Bureau of the federal government. A set of three widely used publications covers the stages of development: *Your Child from One to Six; Your Child from Six to Twelve;* and *The Adolescent in Your Family.* The bureau also publishes other studies of value. A series of studies on growth and developmental characteristics of children and youth has been prepared by Arnold Gesell, Director of the Gesell Institute of Child Development, and his associates.[19]

The curriculum worker will also find most useful the outstanding textbooks on the subject of human growth and development. Among the best known writers on the subject are Marian E. Breckenridge and E. Lee Vincent,[20] G. Hawkes and D. Pease,[21] John Horrocks,[22] A. T. Jersild,[23] J. Murray Lee and Dorris May Lee,[24] Paul H. Mussen, J. J. Conger and Jerome Kagan,[25] Willard C. Olson,[26] Marvin Powell,[27] and Ruth Strang.[28]

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[19] Arnold Gesell and Frances L. Ilg, *Child Development* (New York: Harper & Row, Publishers, Inc., 1949).

Arnold Gesell and Frances L. Ilg, *The Child from Five to Ten* (New York: Harper & Row, Publishers, Inc., 1946).

Frances L. Ilg and Louise Bates Ames, *School Readiness* (New York: Harper & Row, Publishers, Inc., 1964).

Arnold Gesell, Frances L. Ilg, and Louise Bates Ames, *Youth: The Years from Ten to Sixteen* (New York: Harper & Row, Publishers, Inc., 1956).

[20] Marian E. Breckenridge and E. Lee Vincent, *Child Development* (5th ed.; Philadelphia: W. B. Saunders Company, 1965).

[21] Glenn R. Hawkes and Damaris Pease, *Behavior and Development from 5 to 12* (New York: Harper & Row, Publishers, Inc., 1962).

[22] John E. Horrocks, *The Psychology of Adolescence* (2nd ed.; Boston: Houghton Mifflin Company, 1962).

[23] Arthur T. Jersild, *Child Psychology* (5th ed.; Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1960); *The Psychology of Adolescence* (2nd ed.; New York: The Macmillan Company, 1963).

[24] J. Murray Lee and Dorris May Lee, *The Child and His Development* (New York: Appleton-Century-Crofts, Inc., 1958).

[25] Paul H. Mussen, J. J. Conger, and Jerome Kagan, *Child Development and Personality* (2nd ed.; New York: Harper & Row, Publishers, Inc., 1963).

[26] Willard C. Olson, *Child Development* (2nd ed.; Boston: D. C. Heath and Company, 1959).

[27] Marvin Powell, *The Psychology of Adolescence* (Indianapolis: The Bobbs-Merrill Company, 1963).

[28] Ruth Strang, *An Introduction to Child Study* (4th ed.; New York: The Macmillan Company, 1959).

Those educators who wish to analyze research and specialized treatises will find a substantial body of literature available, with new studies supplanting or extending earlier ones in a veritable crescendo of publishing. The National Society for the Study of Education has rendered a signal service to curriculum workers in recent years by the publication of several yearbooks on topics dealing with the pupil as a factor in educational planning.[29]

Among the best types of publications for teachers and other curriculum planners in this area are the summaries of research and generalizations about growth and development published by state departments of education, school systems, and organizations interested in educational planning. Often these publications list growth characteristics of children of different age groups and then suggest the curriculum implications these have. Examples of such publications include the following:

Wisconsin Cooperative Education Planning Program, *Guides To Curriculum Building: The Junior High School Level* (Madison: Wisconsin State Department of Education, 1950).

Green Bay School District, *Child Growth and Development Chart* (Green Bay, Wis.: The District, 1962).

Wilmette Public Schools, *Design for Human Growth* (Wilmette, Ill.: The Schools, 1959).

Faculty of the University School, *How Children Develop*, (2nd ed.; Columbus: The Ohio State University, 1964).

Undoubtedly one of the most useful curriculum bulletins that state and local school systems can prepare for teachers is just such an authoritative guide, with recommendations for types of curriculum experiences and for planning and teaching that best take account of these characteristics of growth.

Important aspects of human growth and development are the needs, developmental tasks, problems, and interests of children and adolescents. Obviously, such factors are important elements in motivation, and hence, as is argued later in Chapter 6, are of great significance to curriculum planners.

The concept of developmental tasks is a particularly meaningful one for the educator. Although the renowned student of adolescent behavior, Leta S. Hollingsworth, gave substance to this concept, Robert J. Havighurst, Caroline Tryon, and others associated with the Committee on Human Development at the University of Chicago have formulated statements of these tasks in terms of significance for curriculum workers. Their publications are essential sources of information.[30]

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[29] See especially National Society for the Study of Education, *Child Psychology*, 62nd Yearbook, Part I, 1963; *Individualizing Instruction*, 61st Yearbook, Part I, 1962; and *The Dynamics of Instructional Groups*, 59th Yearbook, Part II, 1960 (Chicago: University of Chicago Press).

The psychobiological needs of children and youth (not to be confused with demands made of the young by adults) also constitute important considerations in educational planning. They, too, are basic motivational forces, and hence are of great significance to any one who directs the educational experiences of pupils. Chapter 6 will consider these needs in greater detail.

The educator interested in research and scholarly reports on human growth and development should consult publications of the principal agencies and organizations that conduct investigations of a specialized nature. Among these attention is directed to the following:

The Children's Bureau, United States Department of Health, Education, and Welfare, publishes periodically a bulletin entitled, "Research Relating to Children," which is a clearinghouse for unpublished studies on all phases of growth and development. The bimonthly magazine, *Children,* also published by the bureau, is useful to teachers and other curriculum workers.

Society for Research in Child Development, an organization located at Purdue University, Lafayette, Indiana, publishes research monographs on child development and a quarterly journal, *Child Development.* Recently, the society began the publication of a series of volumes entitled *Review of Child Development Research,* Volume I being published in 1964 and Volume II is scheduled for 1965 by the Russell Sage Foundation.

The Fels Research Institute for the Study of Human Development, associated with Antioch College, Yellow Springs, Ohio, conducts longitudinal studies of individuals.

Merrill-Palmer Institute, Detroit, Michigan, also carries on longitudinal studies and other investigations of developmental growth.

Lewis M. Terman and associates made the renowned thirty-five-year follow-up study of the superior child. Five volumes have been published to date under the general title of "Genetic Studies of Genius."

A number of universities have established institutes for the study of child development and welfare or of particular aspects of growth. Well-known agencies of this type are located at the universities of California, Minnesota, Iowa, and Michigan, and at Harvard and Yale.

Organizations that publish magazines, studies, and reports from time to time include the Child Study Association of America, the Association for Childhood Education International, The Association for Supervision and Curriculum Development, and the Mental Health Association of America. Curriculum planners will also find it helpful to read reports and studies by special commissions and *ad hoc* committees which undertake particular assignments in the area of human development. An outstanding example of such reports is a recent one made by the President's Panel on Mental Retardation.[31]

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[30] Robert J. Havighurst, *Human Development and Education* (New York: David McKay Company, Inc., 1953).

Caroline Tryon and Jesse Lilenthal III, "Developmental Tasks: The Concept and Its Importance," in *Fostering Mental Health in Our School* (1950 Yearbook, Association for Supervision and Curriculum Development; Washington, D. C.: The Association, 1950), Chaps. 6 and 7.

Specialists on the school staff—the psychologist, the psychiatrist, the director of special education, and the school counselors—may be assigned the responsibility of bringing pertinent works of these types to the attention of the entire corps of curriculum workers. Certainly, it is evident that the school staff should be aware of the many components of human growth and development, yet it is not realistic to expect each teacher to be familiar with the many kinds of specialized reports and publications available. School systems ought to devise procedures for making the results of research and study available to teachers without burdening them with heavy assignments of study and reading.

Many devices, tests, inventory forms, scales, and reaction instruments of various sorts are available for use in the study of human growth and development. The literature cited previously in this section describes and illustrates the use of some of the more important of these instruments. School faculties or curriculum bureaus of school systems may wish to use on occasion one or more of these aids to study. Specialized skill is necessary for the administration and interpretation of many of these instruments, such as projective tests and personality inventories. Amateurs may use some of the simpler devices and even construct their own, but they should exercise caution in generalizing the results or in formulating conclusions about the growth and development of individual pupils.

Personal Traits, Character, and Personality

This aspect of individuality is, of course, closely related to factors discussed in the preceding section, yet it seems desirable, for emphasis, to treat character and personality as a separate phase of our study of pupils as determinants of the curriculum.

Methods of study suggested in the previous section are also appropriate for gaining an insight into the character and personality traits of pupils. Extensive reading of authoritative publications is a prerequisite to good curriculum planning. Continuing study of the children who comprise the sets for which a program is planned is highly desirable. School psychologists and counseling personnel can assist a school faculty a great deal in this aspect of study and planning.

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[31] The President's Panel on Mental Retardation, *A Proposed Program for National Action to Combat Mental Retardation* (Washington, D.C.: Government Printing Office, 1963).

One area of child study in which there is a dearth of valid and definitive knowledge is the self-perceptions, concepts of self, aspirations, and motivations of children and youth. These are, of course, highly individual matters, and information is meaningful only as it holds true for an individual pupil. Nonetheless, valid generalizations about the nature and character of perceptual patterns, value systems, and similar motivational forces of school-age boys and girls would be models for research by teachers and other school personnel, and sound guides for studying these aspects of behavior. Scholars in the fields of human growth and development and psychology are giving increasing attention to motivational factors in behavior, and the curriculum worker can now get help on these aspects of personality. But much remains to be done, particularly in studying the drives, concepts, and perceptions of individual pupils.

The methods of staff study of children and youth, discussed later, are very appropriate for use in studying personality and character development. Ancedotal records, interest inventories, longitudinal studies of individual pupils, questionnaires, observation, conferences, and similar data-gathering methods are useful. A number of tests and standardized instruments are available for collecting objective data. Most of the reference works and textbooks on personality and character development contain descriptions and analyses of many tests, projective devices, and other methods which may be used in the study of children and youth. Usually the authors also present their interpretation of the data available and theories about personality that are most useful to the educator.[32]

Insight on human personality development may be gained from studies of delinquency, a number of which have appeared in recent years.[33] It is not presumed that more than a very few school pupils, if any, in particular schools, are delinquents; rather, the motivational factors driving youth into delinquent behavior, which are well documented in such studies, are revealing. Frustration in school, rejection by classmates and teachers, failure, boredom, and similar traumatic experiences of school life are often contributory causes of delinquency. A knowledge of such matters will guide curriculum workers in planning appropriate courses of study and school experiences for many youth.

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[32] See particularly Joy P. Guilford, *Personality* (New York: McGraw-Hill Book Company, Inc., 1959) and Robert F. Peck and others, *The Psychology of Character Development* (New York: John Wiley & Sons, Inc., 1960).

[33] William C. Kvaraceus, *Delinquent Behavior: Culture and the Individual*; and *Delinquent Behavior: Principles and Practices* (Washington, D.C.: National Education Association, 1959).

William R. Carricker (ed.), *Role of School in Prevention of Juvenile Delinquency*, U.S. Office of Education, Cooperative Research Monograph No. 10 (Washington, D.C.: Government Printing Office, 1963).

House of Representatives, 86th Cong., 2nd Sess. Committee on Appropriations, *Report to Congress on Juvenile Delinquency* (Washington, D.C.: Government Printing Office, 1960).

Parents, of course, are a most fruitful source of information on the personal, moral, and character development and status of their children. Conferences with parents, visits to the children's homes, and a firsthand knowledge of the neighborhoods in which they live or play help to round out a teacher's understanding of his pupils.

Abilities, Talents, Potentialities, and Achievements

This facet of pupil development and status has undoubtedly been the most extensively studied of any of the items listed in Table 1. And for curriculum planning purposes, it is certainly one of the most significant, for schools cannot fully develop the potentialities of each boy and girl unless those responsible for the educational program know, to the best of their ability to ascertain, the capacities and talents each pupil possesses.

Many kinds of standardized achievement tests, measures of intellectual capacity, prognostic tests, diagnostic tests, and tests of aptitudes are well known to teachers. It is apparent, however, that methods of measuring abilities and aptitudes are inadequate, and that we do not know how, at the present time, to assess adequately a number of important aspects of human potentiality. Flanagan and his associates, who directed the comprehensive study of talents of high school students, wrote that "our tools and methods for the scientific study of man are still crude, crude as the ancient Chinese abacus, yet there is no reason to abandon or condemn them. Without the abacus, high-speed electronic computers could not have been developed."[34] This is particularly true of the two talents we call intelligence and creativeness. We think it may be helpful, therefore, at this point in our presentation to discuss these matters more fully, and to suggest areas for study and investigation by the curriculum worker.

Intelligence. The intellectual status of children and youth has been studied more intensively and thoroughly during the past fifty years than have other traits, yet there is probably more uncertainty today than at any time during these years about the nature of intelligence and its development. These three basic questions concern the educator: What is intelligence? Can it be developed by educational experiences? To what extent should currently used measures of intelligence be a factor in planning school experiences?

A tremendous sweep of our educational practices, policies, and programs in American education today are based on what seems increasingly to be a shoddy, inadequate, if not vicious measure of a cluster of human abilities—the intelligence test. Almost all teachers in America today, particularly in the secondary school, plan their classwork in many of its aspects on the basis of a measure of the intelligence levels of the pupils comprising the class. School policies, such as those determining grouping and sectioning of pupils, tracking, promotion, marking, requirements, and the like, are based on a conception of intelligence that is archaic if not actually false. The limited nature of the usual tests of intellectual ability used by most school systems is well stated by Guilford: "IQ tests were designed to predict success in school learning, particularly in reading, arithmetic, and the subject-matter or informational courses. But we now know that there are many other kinds of intellectual abilities."[35] McVicker Hunt and Benjamin Bloom, working independently, have carefully analyzed the large body of research on intelligence and its measurement. Hunt concludes that "recently, however, a transformation has been taking place in this traditional conception of intelligence and its relationship to experience. Evidence from various sources has been forcing a recognition of central processes in intelligence and of the crucial role of life experience in the development of these central processes."[36] And Bloom insists that "a single early measure of general intelligence cannot be the basis for a long-term decision about an individual. . . . There is little doubt that intelligence development is in part a function of the environment in which the individual lives."[37]

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[34] John C. Flanagan and others, *The Talents of American Youth*: Book I, *Design for a Study of American Youth* (Boston: Houghton Mifflin Company, 1962), p. 17.

When the psychological construct "intelligence" is restricted in meaning to comprise only the predicted ability of a person in relation to other persons in the general population to be successful in learning tasks that call for verbal conceptualization and abstract thinking, it constitutes much too limited a measure of human capability to include many aspects of personality. Yet the so-called intelligence test is often the only measure of ability used by many teachers and administrators as a basis for policy making in curriculum and teaching.

The most significant effort in recent years to broaden the concept of intelligence has been Guilford's conceptualization of the structure of intellect.[38] He has developed a cubical model of intelligence, in which one face of the cube is designated as "basic kind of process or operation performed." This type of classification yields five major groups of intellectual abilities: factors of cognition, memory, convergent thinking, divergent thinking, and evaluation.

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[35] Joy P. Guilford, "Factors That Aid and Hinder Creativity," *Teachers College Record,* 63:388 (February, 1962).

[36] J. McVicker Hunt, *Intelligence and Experience* (New York: The Ronald Press Company, 1961), p. v.

[37] Benjamin S. Bloom, *Stability and Change in Human Characteristics* (New York: John Wiley & Sons, Inc., 1964), p. 88.

[38] Joy P. Guilford, "Three Faces of Intellect," *American Psychologist,* 14:469–479 (August, 1959). See also Joy P. Guilford, "The Structure of Intellect," *Psychological Bulletin,* 53:267–283 (July, 1956); and Joy P. Guilford and P. R. Merrifield, "The Structure of Intellect Model: Its Uses and Implications," *Reports of Psychological Laboratory,* No. 24 (Los Angeles: University of Southern California).

A second classification of intellectual factors, constituting another face of the cube, is based on the kind of material or content involved. There are three types of content: figural, symbolic, or semantic.

The third face of the cube represents the products, of which there are six general kinds; units, classes, relations, systems, transformations, and implications. Thus, a 5 x 6 x 3 unit cube yields ninety factors of intelligence. Guilford states that fifty of these abilities are already known, which is to say that he has identified at least "50 ways of being intelligent." But much more research needs to be done, and eventually the model may be revised to include more or fewer aspects of intelligence. It is just such research that is greatly needed as a basis for curriculum planning and teaching.

Guilford's study points out the necessity of using a multitude of measures to assess fully any pupil's intelligence. And Taylor claims that "the brain which underlies the mind is far, far too complex for us to hope that all of its intellectual activities can be represented by only a single score or by a handful of dimensions."[39] The typical measure of intelligence used in schools—an IQ usually obtained by a short paper-and-pencil test administered in a group situation, often under stress conditions—as a basis for determining much of our educational practice and programs is, at best, an inadequate base on which to develop a curriculum for the maximum self-realization of human beings and, at its worst, is pernicious. Teachers and other curriculum planners should foster in every feasible way the development of much more comprehensive and better means of identifying and assessing human abilities, particularly those that constitute the resources for learning, including abstract thinking, verbalization, creativeness, and the like. In the meantime, the school should use the available intelligence tests for only those purposes for which competent psychologists state they provide valid bases for determining capacities.

Human abilities have an hereditary basis. Hundreds of thousands of Americans have spent long hours practicing the playing of the piano, but there is only one Van Cliburn. Many of the others earnestly wanted to become world-famous artists, but they simply did not have the native talent necessary. Of the tens of thousands of young American men who have run the mile in timed competition, only a mere handful have done it in less than four minutes. The others tried; they were highly motivated, most had been adequately taught form and method, but they simply were not four-minute milers.

Is intellectual capability hereditary? Obviously, there is an innate base for the abilities we call intelligence, just as there is for piano playing or foot racing. It would be a great boon to mankind if everyone who wished to be a great mathematician could become one, but the fact is that only a few persons have been capable of attaining achievements comparable to those of Einstein. Van Cliburn would never have become one of the world's great pianists if he had not had an opportunity to play the piano or had not been taught good techniques. Einstein would never have become one of the greatest mathematicians of all time if he had not had the opportunity to study the subject under expert tutelage.

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[39] Calvin W. Taylor, "Identifying the Creative Individual," in E. Paul Torrance (ed.), *Creativity: Second Minnesota Conference on Gifted Children* (Minneapolis: Center for Continuation Study, 1960); Hunt (*op. cit.*, pp. 308–315) describes the way in which intelligence quotients are determined, thus also raising serious question about their usefulness.

Intellectual, creative, social, and physical abilities and talents grow and develop, and maximum development is possible only with proper nurturing. That is the responsibility of the school, the home, and other educational agencies of all sorts. These environmental influences determine the nature, character, and level, within inherited capabilities, of development. A rich, varied, adaptative environment contributes to the growth and development of talents; an impoverished environment limits development.[40] Whether the capacity of the individual for the development of talents and abilities is solely an innate characteristic or can be changed by environmental factors is not determinable from research, for we have no method of measuring any innate capacity unfettered by environmental influences. Any measure of a human capacity is inevitably a measure of the joint influences of nature and nurture. How many male babies born in the United States could run a mile in less than four minutes will never be known; all we can know is how many who compete in approved track meets can run the distance in that time under specified conditions, measured by instruments devised by human beings themselves.

The curriculum planner can be certain of one thing significant to his planning: Human potentialities in what ever measure they may exist among people will never be fully developed unless the social group in general, through schools, the parents, and other social instrumentalities, provides ample opportunities for the exercise and use of a talent, fosters its development, and approves and rewards those who demonstrate proficiency in the use of such abilities. The Italy of the fifteenth century produced a Leonardo da Vinci; the America of the nineteenth century a Lincoln; and the Germany of the twentieth century a Hitler.

Does the IQ remain constant?[41] If the tests used to measure something labeled "intelligence" are inadequate, as previously stated, we cannot answer the question, for we have no reliable measure of intellectual capacity per se. If we accept such tests as valid measures of something important to us as teachers, we must recognize that they are only relative, never absolute, measures. The test compares a child with another group of children designated as a normal population of children. The author of the test contrives it in such a way that the test items chosen and the mathematical method of determining a score of intelligence results in a distribution of the scores for any age group on a normal curve. Hence scores for determining the IQ, which is a quotient, are scaled in such a manner, mathematically, that the quotient does remain relatively constant for the normal person. A contrived measure and not an absolute one, what the native intellectual capacity of a child may be cannot be determined or whether it changes over the years.

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[40] Research on many aspects of this subject is analyzed in Breckenridge and Vincent, *op. cit.*; Bloom, *op. cit.*, Chap. 3; Hunt, *op. cit.*, Chap. 8; Martin Deutsch and Bert Brown, "Social Influences in Negro-White Intelligence Differences," *Journal of Social Issues,* 20:24–35 (April, 1964); and Panel on Educational Research and Development, *Innovation and Experiment in Education,* A progress report to the U.S. Commissioner of Education and others (Washington, D.C.: Government Printing Office, 1964), pp. 29–38.

[41] For a more detailed analysis of this issue see Nancy Bayley, "On the Growth of Intelligence," *American Psychologist,* 10:805–818 (December, 1955).

From a voluminous body of research Hunt makes these conclusions:

> It is fairly clear from the evidence surveyed in these chapters that impoverishments of experience during the early months can slow up the development of intelligence. In terms of the traditional measurement of intelligence, this means reducing the IQ. Various bits of the evidence have strongly suggested that such slowed development is permanent, that it may result not only in a permanently reduced IQ but in a failure of the basic criterion capacities of individuals to develop to the degree that they might have developed under other, more varied programs of encounters with the environment which were appropriately matched to the intellectual structures developing within the child.[42]

Bloom's conclusions support the same position; moreover, he estimates the possibilities in variation:

> . . . the level of measured general intelligence is partially determined by the nature of the environment. . . . extreme environments may be described as *abundant* or *deprived* for the development of intelligence in terms of the opportunities for learning verbal and language behavior, opportunities for direct as well as vicarious experience with a complex world, encouragement of problem solving and independent thinking, and the types of expectations and motivations for intellectual growth . . . marked changes in the environment in the early years can produce greater changes in intelligence than will equally marked changes in the environment at later periods of development . . . a conservative estimate of the effect of extreme environments on intelligence is about 20 IQ points.[43]

Curriculum workers should seek to develop a challenging set of experiences for each pupil throughout his developmental period; the question whether native capacity changes or if education is simply taking place is of little importance to teachers who seek the maximum development of each person.

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[42] Hunt, *op. cit.*, p. 346.

[43] Bloom, *op. cit.*, pp. 88–89.

Creativeness. Among the great array of talents and potentialities possessed by human beings, creativeness has been selected for study in recent years by a group of eminent psychologists. Their research has given educators a broader conception of human personality, and fresh evidence on an important dimension for curriculum planning. These studies are significant source material for an examination of curriculum factors.[44]

Creativity is best described in terms of specific traits of persons who have been judged to be creative. Each researcher has developed his own set of criterion measures, but many of them have a considerable number of common elements. MacKinnon believes that creativeness fulfills three conditions:

> It involves a response or an idea that is novel or at the very least statistically infrequent. But novelty or originality of thought or action, while a necessary aspect of creativity, is not sufficient. If a response is to lay claim to being a part of the creative process, it must to some extent be

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[44] The leading research scholars and their principal publications in this aspect of the study of human talents are:

Jacob W. Getzels and Philip W. Jackson, *Creativity and Intelligence* (New York: John Wiley & Sons, Inc., 1962).

Joy P. Guilford, "Creativity," *American Psychologist*, 5:444–454 (September, 1950).

———, "Factors That Aid and Hinder Creativity," *Teachers College Record*, 63:380–392 (February, 1962).

Donald W. MacKinnon, "Conditions for Effective Personality Change," in A. Harry Passow (ed.), *Nurturing Individual Potential* (Washington, D.C.: Association for Supervision and Curriculum Development, 1964), pp. 12–27.

———, "Measurement of Creativity," unpublished paper read at Summer Institute on College Admissions, Stanford University, 1962.

———, "The Nature and Nurture of Creative Talent," *American Psychologist*, 17:484–495 (July, 1962).

———, "Nurturing Creativity in the Able Student," unpublished paper read at the Senior Workshop for Teachers of Secondary Gifted Classes, Oakland, California, 1960.

Calvin W. Taylor (ed.), *Creativity: Progress and Potential* (New York: McGraw-Hill Book Company, Inc., 1964).

———, "A Tentative Description of the Creative Individual," in Walter B. Waetjen (ed.), *Human Variability and Learning* (Washington, D.C.: Association for Supervision and Curriculum Development, 1961).

E. Paul Torrance, "The Creative Personality and the Ideal Pupil," *Teachers College Record*, 65:220–226 (December, 1963).

———, "Creative Thinking of Children," *Journal of Teacher Education*, 13:448–460 (December, 1962).

———, *Education and the Creative Potential* (Minneapolis: University of Minnesota Press, 1963).

———, *Guiding Creative Talent* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.

———, *Talent and Education* (Minneapolis: University of Minnesota Press, 1960).

> adaptative to, or of, reality. It must serve to solve a problem, fit a situation, or accomplish some recognizable goal. And, thirdly, true creativeness involves a sustaining of the original insight, and evaluation and elaboration of it, a developing of it to the full.[45]

Getzels and Jackson state that "the term 'creativity' refers to a fairly specific type of cognitive ability reflected in performance on a series of paper-and-pencil tests."[46]

Torrance has chosen "to define creative thinking as the process of sensing gaps or disturbing, missing elements; forming ideas or hypotheses concerning them; testing these hypotheses; and communicating the results, possibly modifying and retesting the hypotheses."[47]

Creative ability comprises not only those talents that enable the person to produce a work of creative art, such as a painter or a composer does, but the ability to behave in a creative manner in a complex undertaking of any kind. As was stated to be true of intelligence, creativeness has many components and can be manifested in many ways. Some of the most important characteristics of a truly creative person, as identified by these scholars, are these:

1. He thinks with greater fluency; he has more ideas about associational relationships; he sees new categories of kinds of things.
2. He has greater flexibility in his thinking; he sees new possibilities in a situation; he develops new meanings; his thinking is in several directions.
3. He is original; his ideas are novel; his responses are of the infrequent kind.
4. He is divergent in his thinking; he keeps an open mind until his course of action becomes clear; he searches for new ways; he considers factors that may escape the attention of others; he is productive; he redefines; he has cognitive flexibility.
5. He has a high degree of sensitivity to problems; he more readily sees that something is wrong, that there are defects; he senses problems.
6. He is not satisfied with things as they are; he seeks better ways of doing things.
7. He has self-confidence, self-assurance, social boldness; he is especially confident, almost egotistically so, about his own work and his judgment.
8. He is independent, an independent thinker and worker; he resists pressures to conform to the group; he can be with people or he can let them alone; he is autonomous.
9. He is a curious person; he toys with ideas; he has an inquiring mind;

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[45] MacKinnon, "The Nature and Nurture of Creative Talent," p. 485.

[46] Getzels and Jackson, *op. cit.*, p. 16.

[47] Torrance, *Guiding Creative Talent*, p. 16.

he has an insatiability for doing things, especially to solve things, or put things in order; he enjoys a richness of experience.

10. He is more concerned about meanings and implications than about facts and details.
11. His values tend to be theoretical and esthetic, rather than social, economic, political, or religious.
12. He is the intuitive type, rather than the sensory perception type. The sensory aspects of experience are not as important to him as what might be, as what could be done to link the experience to the future.
13. He is intellectual.

The individual who possesses all these traits to a high degree would really be quite a person. This list states the kinds of characteristics which research workers in the field search for in their study of creativeness. Many of the characteristics are interrelated. Obviously, not all creative persons exhibit a high level of ability in each of them; yet from a set of valid measures of these qualities, we should be able to identify creative pupils. Although there have been few studies in this area thus far and although the measuring instruments have not been extensively used under varying conditions so that validity of some of them may be questioned, it now seems evident that curriculum workers who devote considerable study to the subject can readily identify pupils who have a high level of creative talents. MacKinnon, who questions the value of some of the tests used in these studies, bases his research on an analysis of the characteristics of people in selected fields who are judged by competent persons to be highly creative. His description of creative persons, particularly architects[48] and his studies of the school careers of these people are most helpful to teachers and others responsible for planning classroom activities.[49] And Torrance, although he reports his research, devotes much of his major book to a discussion of the guidance and development of creative talent by parents and teachers.[50]

The highly creative child is often a troublesome child for the teacher; he refuses to conform, to do what is expected of him; and he is independent. He may become bored with what he regards as an excessive amount of group activities, with a forced necessity to "cooperate." He may not be a superior student as measured by the typical classroom standards of superiority, although he is intelligent. He may argue with the teacher about procedures and methods, and even goals. He has originality, and this may trouble the teacher, for he wants to do things differently. Restless, curious, inquisitive, he knows what he wants and what to do with or about it. What can a teacher do about such a person in a class of thirty-two pupils? The usual solution is to fence him in, to curb him, to force him to conform, or at least to stop "his silliness" and let the class get on with the assigned tasks.

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[48] Donald W. MacKinnon, "The Personality Correlates of Creativity: A Study of American Architects," in Gerhard S. Nielsen (ed.), *The Child and Education,* Proceedings of the XIV International Congress of Applied Psychology (Copenhagen: Munksgaard, 1962).

[49] See particularly his talk to the Oakland (California) Workshop, "Nurturing Creativity in the Able Student."

[50] Torrance, *Guiding Creative Talent.*

If we as curriculum workers really believe that the school should foster the maximum development of each child, we cannot, in discharging our professional obligations to children and society, continue to curb, to smack down the creative child (we are not confusing the creative pupil with the troublesome child or the misbehaved or antisocial child who acts as he does for other reasons). For their own self-satisfaction, their self-actualization, their gratification of basic needs, for the fulfillment of our belief in the perfectability of man, for the future welfare of a society desperately in need of creative talents, teachers and administrations must develop to the fullest these creative talents of pupils.

All the research studies bearing on the point show that creative talent, as the concept has been developed here, is not measured by the tests currently used to measure "intelligence" or, more properly, scholastic aptitude. Taylor states that studies by Getzels and Jackson and by Torrance show that "if an IQ test is used to select top level talent, about 70 per cent of the persons who have the highest 20 per cent of the scores on a creativity test battery will be missed."[51] Taylor concludes: "In our Utah conference reports on creativity there have been several indications that creativity scores and IQ scores are essentially unrelated or at least are only lowly related."[52] This is not to say that the creative child is not intelligent in the usual meaning attached to that word. A feeble-minded person, for example, will not be creative. The creative child usually makes above-average marks in school. The studies simply show that among the highly intellectual, as measured by intelligence tests, and the highly creative, as measured by tests used in these studies, only about 20 percent of the children so identified separately will belong in both groups. Hence the correlation between the two measures is statistically low.

As a part of the discussion of intelligence and creativeness, comment should be made on the practice in recent years of many school systems to label certain groups of pupils as "underachievers" or "overachievers" on the basis of studies of achievement.[53] Two basic errors exist in such a procedure, and the practice of so identifying children may be a vicious one. The errors are in the selection of the criterion for "under" or "over" and the selection of the measures of achievement. The criterion usually is the IQ. If the intelligence test actually measured intellectual ability, how by definition can any one exceed his potential? Obviously, either the test was not a true test of capacity or the measures of achievement in terms of this capacity were faulty. In either situation, it is highly inaccurate to designate a pupil as an overachiever; the same errors of definition apply to underachievers.[54]

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[51] Taylor, "A Tentative Description of the Creative Individual," pp. 67–68.

[52] *Ibid.*, p. 68.

[53] For a fuller discussion of this subject see Robert L. Thorndike, *The Concepts of Over- and Under-Achievement* (New York: Bureau of Publications, Teachers College, Columbia University, 1963).

But the most deplorable result of this practice in school is the further support it gives to the use both of the IQ as *the* measure of human potentialities that should be nurtured by the school and of the standardized achievement test as *the* measure of the schooling that should be provided. If designations of under- and overachievers are used as a hint that the school needs to make a much more thorough study of the traits and characteristics of individual pupils, the practice might be acceptable, although the procedure ignores the "normal" achiever, who also should be studied. Unfortunately, however, the customary use of such labels is to identify pupils who should either be referred to the guidance officer or be reported to their parents so they can be cajoled into doing better or who, their teachers are sure, will crack up sooner or later and revert to their predicted plane of accomplishments. It is high time the schools broadened their conception of talents and their definitions of achievement.

Exceptional Child. Human talents, regardless of how measured, are undoubtedly distributed among a true cross section of the population on a normal curve of frequency, the so-called bell-shaped curve. Knowledge of this law of nature does not blind us, however, to the fact that a person who belongs in the lower part of the distribution on one trait, validly measured, is not necessarily low on another trait. The person who can run a mile in less than four minutes may not be able to play the piano with any perfection at all, and vice versa.

The natural order of the distribution of talents means that the school enrolls a number of pupils who have either a very low or a very high level of ability to learn concepts, read, compute, create, draw generalizations, and do similar activities needed to be successful in school learning experiences. In educational parlance we designate children who fall in the extreme tails of any distributions of measures of ability as exceptional. Most schools have developed special educational programs for exceptional children, particularly children who deviate markedly in scholastic aptitude or academic talent, in social and emotional development essential to group living, and in physical development. Obviously, in light of our thesis that the school should foster the maximum development of each child in terms of his talents, abilities, capacities, and potentialities, it must provide proper educational experiences for children of all levels of talents and abilities—superior, average, and inferior. And the concept of talents should not be limited to verbal ability or intelligence as measured by the customary tests.[55]

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[54] See Getzels and Jackson, *op. cit.*, pp. 26–28, for a further discussion of this point.

No new or different educational policies or concepts are called for in the education of exceptional pupils. The same basic principles that guide curriculum planning for the intellectually gifted, or the creatively talented, or the child of "normal"—that is, most commonly occurring—academic ability or creativeness apply also to planning for those of lesser levels of ability. Our discussions of theories of learning, of motivation, of readiness, of self-concepts, of aspirations apply equally well to the exceptional child of whatever type of exceptionality. Obviously, the school experience provided the exceptional child will differ from those provided normal children, but the principles and bases for planning are the same.

One new dimension, however, appears necessary in the school's program for two special groups of children: the mentally retarded, and the deprived. This is the desirability of doing whatever is possible about the nonschool influences that shape the lives of these pupils. The significant report by the President's Panel on Mental Retardation[56] proposes steps that should be taken by the school and other agencies concerned about the mentally deficient. Although the school may be unable to counteract directly embryonic factors and environmental influences in the first few years of life that seem to cause some types of retardation, it can provide both secondary school pupils and adults with educational programs on prenatal and postnatal care that may in time ameliorate conditions that cause some mental abnormalities. And when such children do reach an age when training and education will benefit them, the schools can do much to contribute to the self-realization of these pupils. Some remarkable advances have been made in a number of research and developmental centers in various parts of the world in overcoming mental retardation and in the education of afflicted children. Schools ought to keep abreast of these new approaches and methods.[57]

Deprivation, as Havighurst and others so well point out,[58] may be affectional deprivation, in which the child is denied an adequate amount of affection, love, belongingness, and emotional support to meet human needs; model-person deprivation, the absence in the child's life of model persons who represent a good example for imitation by the child as he grows up; intellectual deprivation, in which a child lives in a social environment in which intellectual activities are at a minimum; and nutritional deprivation, which exists to some extent even in the United States, not only because a child may not have enough food but because he may not have enough of the proper kinds of food. Riessman, in his startling study of cultural deprivation, states that in 1960 one child in three in the fourteen largest cities of the United States was culturally deprived, and he estimates that one in two will belong in this category in these cities by 1970.[59]

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[55] James F. Gallagher and James W. Moss, "New Concepts of Intelligence and Their Effect on Exceptional Children," *Exceptional Children,* 30:1–5 (September, 1963).

[56] President's Panel on Mental Retardation, *op. cit.*

[57] B. W. Richards (ed.), *Proceedings of the London Conference on the Scientific Study of Mental Deficiency* (2 vols.; Dagenham, England: May & Baker, Ltd., 1962).

[58] Robert J. Havighurst and Lindley J. Stiles, "National Policy for Alienated Youth," *Phi Delta Kappan,* 42:283–291 (April, 1961); Robert J. Havighurst, "Problem Children and Social Class Differences in the Schools," unpublished paper read at the Thirtieth Annual Summer Conference of the School of Education, University of Michigan, July 31, 1959. See also Educational Policies Commission, *Education and the Disadvantaged American* (Washington, D.C.: National Education Association, 1962); "The Disadvantaged: A Special Feature," *NEA Journal,* 52:16–30 (April, 1963).

The school cannot correct many of the ills facing the society, even if this were possible, so teachers may not be able to alleviate all forms of deprivation for all children, but it should, in cooperation with other community agencies, reduce as much as is humanly possible deprivation suffered by children. Such efforts call for a highly skilled staff of social workers, psychologists, and psychiatrists in the employment of the school; special educational experiences for children in need of cultural stimulation; close cooperation between school and home, even when the home is the shabbiest sort of a tenement and even when the parents, or whoever is present as caretaker of the child, are illiterate or morally degraded; nursery school and child care programs, such as are provided extensively by many European countries for children of working mothers or of destitute families; expanded public health service and recreational opportunities; summer camps; and similar services and programs already proven beneficial in forward-looking communities where leaders have come to grips with the problems of deprivation.[60]

Project TALENT. An imaginative and comprehensive project for the study of talents among American high school youth is now underway. Known as "Project TALENT," and directed by John C. Flanagan of the American Institute for Research at the University of Pittsburgh, it is the first effort to study youth on a national scale and to probe many human talents and characteristics. The results of this study are of great significance to all educators, but especially so to those specifically charged with responsibilities for curriculum planning.

The following reports of the study have been issued:

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[59] Frank Reissman, *The Culturally Deprived Child* (New York: Harper & Row, Publishers, Inc., 1962), p. 1.

[60] On this point see, especially, Samuel A. Kirk, *Early Education of the Mentally Retarded* (Urbana: University of Illinois Press, 1958); and U.S. Office of Education, *Programs for the Educationally Disadvantaged*, Bulletin 1963, No. 17 (Washington, D.C.: Government Printing Office, 1963).

John C. Flanagan and others, *Designing the Study* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1960).

John C. Flanagan and others, *The Talents of American Youth* (Boston: Houghton Mifflin Company, 1962).

John C. Flanagan and others, *Studies of the American High School* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1962).

M. F. Shaycoft and others, *Studies of a Complete Age Group—Age 15* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1963).

G. R. Burket, *Selected Pupil and School Characteristics in Relation to Percentage of Negroes in School Enrollment* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1964).

John C. Flanagan and others, *The American High-School Student* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1964).

The objectives of Project TALENT are

1. To survey available talent
2. To identify interests, aptitudes, and background factors
3. To determine effects of lack of interest and motivation
4. To identify factors affecting vocational choice
5. To identify predictors of creativity and productivity
6. To determine the effectiveness of various types of educational experience
7. To study procedures for realizing individual potential[61]

In seeking to achieve these objectives, the project hopes to produce

1. An inventory of human resources
2. A set of standards for educational and psychological measurement
3. A comprehensive counseling guide identifying patterns of aptitude and ability that are predictive of success in various careers
4. A better understanding of how young people choose their life work
5. A better understanding of the educational experiences that prepare students for their life work[62]

A battery of twenty-three aptitude and achievement tests, a preference test, two short themes, and three inventories were used to collect data in March, 1960, from over 440,000 students enrolled in grades 9 through 12 in 1353 high schools located throughout all the states and the District of Columbia, except Alaska. Each high school participating in the study filled out three questionnaires designed to survey schools and school programs. About 2000 items of information were collected about each student and 1000 about each school.

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[61] John C. Flanagan and others, *The American High School Student* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1964), p. 1–3.

[62] *Ibid.*, pp. 1–4.

The project provides a great deal of information about the talents, potentialities, and interests of American youth, and also about school policies and programs, and their effectiveness in developing these capabilities. The staff plans to make studies of such educational matters as the relation of the size of the high school, the relative amount of expenditures, and the size of the class unit to the development of talent and educational attainments. The effectiveness of the school guidance program will also be probed, as well as many matters of great interest to curriculum planners. The reports of findings of the project will be important source material for curriculum planners.

Home, Family, and Community Conditions

By far the most significant influence on the character of the child—his social and emotional growth, his personality, his values and morals, and his self-concepts, motivations, and aspirations—is the family. And the social group in which he moves and with whose members he has close relationships—his relatives who live nearby, his playmates, his classmates, the neighborhood group—also all contribute, in varying degrees, to the shaping of the personality of the growing child and the adolescent. The intellectual climate of the home and the attitude of the parents about schooling affect the child's behavior and accomplishments in school. Many research studies on one or more of these relationships justify such statements. Some, such as studies of delinquency, social maladjustments, emotional disturbances, and neuroticism, show the effects of poor family and social conditions on the child's development and on his behavior; others study opposite conditions, and similarly find a high relationship between "good" conditions and wholesome development of all kinds.[63]

Motives, drives, incentives, aspirations, self-concepts, and the actualization of the self are intimately related to the family situation and to the cultural, social, and emotional climate of the home. No teacher can plan learning experiences of maximum validity and significance to the individual pupil without a knowledge of the family situation, gained either firsthand or vicariously by a study of the pupil himself. Conant, in analyzing the nature of schooling in slum sections of large cities, points out the necessity for taking account of neighborhood conditions in curriculum planning:

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[63] These relationships are discussed more fully in Robert R. Sears, Eleanor E. Maccoby, and Harry Levin, *Patterns of Child Rearing* (New York: Harper & Row, Publishers, Inc., 1957); and Jersild, *Child Psychology*, Chaps. 7 and 8. Also, see Carle C. Zimmerman and Lucius F. Cervantes, *Successful American Families* (New York: Pageant Books, Inc., 1960) for a study of some factors that are conducive to good family life.

> One needs only to visit such a school to be convinced that the nature of the community largely determines what goes on in the school. Therefore to attempt to divorce the school from the community is to engage in unrealistic thinking, which might lead to policies that could wreak havoc with the school and the lives of children. The community and the school are inseparable.[64]

But we hasten to point out that family and community factors do not determine solely the set of conditions in which curriculum planning takes place. Many other elements must be considered, as is shown in the next chapter. In any situation, it would be morally as well as philosophically unsound for an educator to accept the assumption that a child's opportunities for development and education should be restricted and be confined to a narrow structure of possibilities simply because of race, family, religious, or neighborhood conditions. Children should not, in a democracy, be denied the rights accorded other children simply on the basis of home and community conditions over which they have no control.[65]

Gathering reliable and usable information about family, home, and community conditions, and the nature and characteristics of peer groups is usually more difficult than it is for the other factors listed in Table 1. A considerable body of helpful data about the neighborhood may be obtained from the decennial census reports. Some of the published tabulations are for census tracts that may be largely coterminous with the area served by the school. Other data are available through individual arrangements with the Census Bureau. These reports give information on such matters as race, color, age, sex, marital status, nativity, mother tongue, mobility, education, household relationships, employment status, occupation, incomes, housing, and migration.

As a part of a comprehensive guidance program, most school systems now collect information about the family of each pupil. Parent conferences yield useful information. Reports by school social case workers are also pertinent. Questionnaires on a variety of these matters, inventory studies, and similar methods of study are also appropriate for an investigation of home and neighborhood factors, but such subjective data must be properly interpreted.

The teacher who is an insightful observer can, of course, learn a great deal about the general cultural and economic status of the neighborhood by simply taking account of things he observes in the community or even the neighborhood. The teacher who works in a slum area school is well aware of conditions in general, as is the teacher employed in a high-income suburban school district. But such observations do not provide an understanding of the emotional, social, and affectional status of the home life of individual children. A knowledge of individual learners must be based on a study of the individual, not on generalizations from gross data.

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[64] James B. Conant, *Slums and Suburbs*, New York: McGraw-Hill Book Company, Inc., 1961), p. 20.

[65] On this point see Melvin Turnin, "Slums and Suburbs: A Review," *American Sociological Review*, 27:421 (June, 1962).

One aspect of environment conditions merits such attention. An important factor in curriculum planning, particularly at the secondary school level, is the employment and occupational situations in which the youth will find themselves when they graduate or leave school prior to graduation. Choices about careers, or at least initial occupations, are often made during the secondary school years. All members of the staff with guidance responsibilities—and this includes the entire staff—need to have reliable information on current trends in employment, opportunities for employment, shifts in occupational patterns, wage levels, requirements for various types of occupations, and the like. School counselors should collect such data and make them available in useful form to the entire staff. Briefly, the decennial reports and surveys and estimates made from time to time by the Census Bureau are the principal sources of information, but the Department of Labor also publishes many valuable reports as well as occupational guides of various types. State and local agencies often compile data on labor force conditions for the state, and for local areas within the state. Moreover, many guidance departments of school systems make studies, often on a continuing basis, of the employment situation and occupational patterns of the local community. These are, of course, desirable, but in view of the great mobility of the American people, especially of young adults, schools should not adopt a provincial outlook on employment opportunities, nor plan a curriculum designed to provide vocational training just for jobs or occupational openings in the local community.[66]

The Nature of the Learning Process

Another important body of knowledge which the curriculum worker needs about pupils is the understanding of the process by which they learn. Education is the product of learning, and schooling is the provision of selected learning experiences. Obviously, the school staff should select the kinds of learning experiences and develop them in such a way that learning takes place, and as effectively as possible. We consider the nature and process of learning to be so significant for planning and teaching that Chapter 6 is devoted to the subject.

Here we are interested in methods of learning about learning. Foremost, teachers should study the subject thoroughly in undergraduate and graduate courses in university. The literature is voluminous; hence courses for teachers should consider in depth not only principles of learning and factors that facilitate or hinder learning, but also implications of research findings and theories for curriculum planning and teaching.[67]

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[66] J. Galen Saylor, "Migration of High School Graduates of Fillmore County, Nebraska" (Lincoln, Nebraska: University of Nebraska, Department of Secondary Education, 1960), Mimeographed.

Another fruitful method of helping curriculum planners broaden their understanding of the learning process is organized programs of child study, such as are discussed in the next section. Systematic study of children involves a probing of their motivations, self-concepts, needs, anxieties, self-actualization, and similar determinants of behavior, which are the basis of experience.

In an effort to improve the quality of curriculum planning some school systems and state departments of education have found it helpful to commission a committee or an individual to prepare a bulletin for teachers on the psychology of learning, with special attention being given to the implications of such findings for curriculum planning.[68]

Cooperative Staff Study of Pupils

Throughout our discussion in this section emphasis was placed on the necessity of studying the particular group of children and youth for whom an education is being planned. Teachers teach a particular group of boys and girls in a specific schoolroom at a given period in their educational development. Generalizations about children and youth based on scholarly works are, of course, essential but, in addition, detailed and comprehensive knowledge about individual children is a necessity. There is no "average" child nor one who conforms to the norms of the population in most attributes. Reading a research report on what 2000 adolescents check as their most disturbing problems does not tell the teacher what problems concern sixteen-year-old Mary, enrolled in his geometry class in Sunnyvale High School, nor what her motivations may be.

During the past twenty years, educators have evolved a plan for the study of children by members of the faculty of a school or a school system that has made great contributions to teachers' understanding of their pupils. These programs were initiated under the sponsorship of the Commission on Teacher Education of the American Council on Education, and the experimental programs became the model for similar study by school staffs throughout the nation.[69] The original project was under the direction of the Staff of the Division on Child Development and Teacher Personnel of the commission, which was located at the University of Chicago. This institution has continued to direct in-service study programs by teachers. Later, Daniel A. Prescott, who was director of the original project at the University of Chicago, developed a similar program at the Institute of Child Study, University of Maryland. The procedures used are fully described in a recent book.[70] A number of other teacher-education institutions also assist school staffs in carrying on child study programs.[71]

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[67] The best example of such an approach is Ernest R. Hilgard (chm.), *Theories of Learning and Instruction*, 63rd Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1964).

[68] As an example of such an endeavor see "Learning: A Special Feature," *NEA Journal*, 52:19–32 (March, 1963).

[69] American Council on Education, Commission on Teacher Education, *Helping Teachers Understand Children* (Washington, D.C.: The Council, 1945).

USING INFORMATION ABOUT PUPILS IN CURRICULUM PLANNING

An understanding of pupils of the scope and depth suggested by Table 1 is, of course, wasted effort unless it becomes a basis for the selection of the learning experiences for the pupils. The next concern, therefore, of the curriculum worker is the process by which pupil factors are used as a basis for planning.

But we must interject a most important consideration at this point: as was stated in Chapter 1, curriculum planning is a very complex process, it must be based on concepts, information, insights, and values derived from a number of major sources, and it requires the most creative thinking. A good curriculum can never be determined on the basis of a one-to-one relationship with any single factor or even a matrix of conditions derived from just one of its basic determinants. All pertinent factors must be considered simultaneously, as was illustrated by the model shown in Figure 1. Curriculum decisions are judgment values that should represent the decision maker's best choices among alternative courses of action. Pupils, although individually and as a group of fundamental and irreplaceable element in the planning process, are not exclusive considerations. Chapter 3, for example, will consider the second major factor that must be considered—the social group that establishes and supports the school.

The dilemma facing the educator as he plans educational programs for schools is well illustrated by the widely acclaimed and highly influential recommendations of a great student of American secondary education—James B. Conant. For example, he recommends[72] that "it should be the policy of the school that every student has an individualized program" (Recommendation 2); yet in Recommendation 9 he advocates that the course of study of academically talented pupils should include a minimum program of "four years of mathematics, four years of one foreign language, three years of science, in addition to the required four years of English and three years of social studies; a total of eighteen courses with homework to be taken in four years."

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[70] Daniel A. Prescott, *The Child in the Educative Process* (New York: McGraw-Hill Book Company, Inc., 1957), Chap. 13.

[71] See Los Angeles County, Office of County Superintendent of Schools, *A Ten-Year Report of the Child and Youth Study Program in Los Angeles County* (Los Angeles: The Superintendent, 1962).

[72] James B. Conant, *The American High School Today* (New York: McGraw-Hill Book Company, Inc., 1959).

Does the curriculum planner plan an individualized program for each pupil or does he prescribe minimum requirements for all students, regardless of their interests, talents, and capabilities? Note that Conant urges the school counselor to enroll all superior academic pupils in eighteen units of work in the five academic fields, regardless of talents he may possess in music, art, design, or other nonacademic fields. He adds weight to these recommendations by urging the schools to make an "academic inventory" each year of the subjects studied by superior pupils, so all may know whether they are studying the specified eighteen subjects (Recommendation 11). What constitutes the best educational program for pupils of varying talents and abilities?

The alternative choices facing the curriculum planner is well illustrated by a later report of Conant's. In his recommendations for schools in extremely different types of neighborhoods, slums and suburbs,[73] he emphatically points out the necessity of gearing the educational program of the secondary school to the achievement level, cultural background, and aspirations of its pupils. But what kind of learning experiences are appropriate for pupils, collectively or individually, who live in a particular environmental situation? Should the curriculum planner agree with Conant when he says that "I submit that in a heavily urbanized and industrialized free society the educational experiences of youth should fit their subsequent employment"[74] or with Paul Goodman?

> His [Conant's] problem is then to get the trained children into existing jobs in the community, and to tailor the training *toward* those jobs. He does not entertain the idea that perhaps it is partly *because* of the very prospect of those jobs and the lack of incentive to fit into that existing community, that there are so many low-scorers, and drop-outs 65% unemployed, and high school graduates 50% unemployed. . . .[75]

We state again that the selection of any set of educational experiences solely on the basis of particular characteristics of pupils is not good curriculum planning. What, then, does constitute a valid basis on which to plan a curriculum for individual pupils? That is a philosophical question and will be dealt with more fully in Chapter 4 as well as elsewhere.

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[73] Conant, *Slums and Suburbs.*

[74] *Ibid.*, p. 40.

[75] Paul Goodman, "Slums and Suburbs: A Book Review," *Harvard Educational Review*, 32:112–116 (Winter, 1962).

FOR FURTHER STUDY

Almy, Millie. *Ways of Studying Children.* New York: Bureau of Publications, Teachers College, Columbia University, 1959.

An excellent guide to the methods of child study. It suggests procedures and techniques which teachers may use to gain an understanding of young children.

Berelson, Bernard, and Gary A. Steiner. *Human Behavior: An Inventory of Scientific Findings.* New York: Harcourt, Brace & World, Inc., 1964.

An outstanding analysis and collation of a tremendous body of research on many aspects of human development and behavior. An essential handbook for any curriculum planner.

Bloom, Benjamin S. *Stability and Change in Human Characteristics.* New York: John Wiley & Sons, Inc., 1964.

An extensive and penetrating analysis of research on the changes that occur in human development as a result of both heredity and environment. Concludes that change in many characteristics is significantly related to environmental factors.

Combs, Arthur W., chm. *Perceiving, Behaving, Becoming: A New Focus for Education.* 1962 Yearbook, Association for Supervision and Curriculum Development. Washington, D.C.: The Association, 1962.

Four psychologists present concepts on the growth and development of the self and of the needs of the person for self-actualization. In the ten subsequent chapters, the ways in which the school may contribute to the development of selfhood are discussed.

Counts, George S. *Education and American Civilization.* New York: Bureau of Publications, Teachers College, Columbia University, 1952.

Chapters 20 and 21 present characteristics of educational programs that foster the development of the individual.

Flanagan, John C., and others. *The American High-School Student.* Pittsburgh: Project TALENT Office, University of Pittsburgh, 1964.

Reports the findings of a research study of 440,000 students in a cross section sampling of high schools in the United States. This is one of the publications of Project TALENT, the most extensive study ever made of high school students.

Havighurst, Robert J., Paul H. Bowman, Gordon P. Liddle, Charles V. Matthews, and James V. Pierce. *Growing Up in River City.* New York: John Wiley & Sons, Inc., 1962.

One of the best illustrations of a comprehensive study of adolescents in a city. Describes methods and instruments used in such a study, and reports findings.

Hunt, J. McVicker. *Intelligence and Experience.* New York: The Ronald Press Company, 1961.

A scholarly and comprehensive analysis of research on the intellectual development of children and youth. It shows the significant influence of environmental conditions on development.

———. "The Psychological Basis for Using Pre-School Enrichment as an

Antidote for Cultural Deprivation," *Merrill-Palmer Quarterly,* 10:209–248 (July, 1964).

After brilliantly attacking the concept of a fixed intelligence quotient, Hunt presents a strong plea for a rich cultural environment in the nurturing of children. An excellent bibliography of related studies is included.

MASON, ALPHEUS T. "American Individualism: Fact or Fiction," *American Political Science Review,* 46:1–18 (March, 1952).

An excellent analysis of the historical development of individualism in the United States. Many citations to the writings of the founding fathers are included.

PASSOW, A. HARRY, AND ROBERT R. LEEPER, EDS. *Intellectual Development: Another Look.* Papers from the ASCD Eighth Curriculum Research Institute. Washington, D.C.: Association for Supervision and Curriculum Development, 1964.

The papers by Millie Almy and Donald M. Johnson consider the intellectual development of children, and some issues in guiding the process.

STENDLER, CELIA, ED. *Readings in Child Behavior and Development.* 2nd ed. New York: Harcourt, Brace & World, Inc., 1964.

Well selected readings on motivation and learning, socialization, intellective processes, stability of behavior, and other topics.

STEVENSON, HAROLD W., AND OTHERS, EDS. *Child Psychology.* 62nd Yearbook, Part I, National Society for the Study of Education. Chicago: University of Chicago Press, 1963.

An excellent collection of chapters on many aspects of the development of children, particularly those of great importance for curriculum planning.

TAYLOR, CALVIN W., ED. *Creativity: Progress and Potential.* New York: McGraw-Hill Book Company, Inc., 1964.

An excellent summation of the most important and current research findings on creativity. Six authorities on the subject bring together a great deal of information on the nature of creativeness, its development, and the role of the school in fostering its nurture.

CHAPTER 3

Social Influences on the Curriculum

The school always educates pupils, but it always educates them in a social situation at a particular time in history and a particular place in the world. The education of the young is a social undertaking. In Chapter 2, consideration was given to pupils as one of the fundamental factors in the educative process; in this chapter we will analyze social organization, values, conditions, and expectations as another basic element in curriculum planning.

The school is an agency established by a social group to serve a group purpose. The society has certain ends-in-view for the development of the individual. These ends-in-view become the basic factor in the determination of the aims of education. The whole structure and character of the educational program of the school will be determined by the dominant social forces at work in a society at any given time.

Hence the fundamental obligation of the school as a social instrumentality is to achieve the goals that the citizens have in mind as they establish and operate the schools. These aims, in general terms, comprehend the transmission of the culture of the society and its values, beliefs, ideals, traditions, aspirations, and modes of behavior so that not only will these unique characteristics of a social group as well as the integrity of the society itself be perpetuated, but the conditions of the life of the social group will be improved. Perpetuation and improvement are both posited as responsibilities of the school. The young must be prepared for membership in the society, and one of the tasks, at least in the United States, of each generation is to direct its own development and to enhance the culture of the nation.

THE CULTURAL BASES OF THE CURRICULUM

Inasmuch as the school is a social agency for the induction of the youth into the life of the group and for the perpetuation of its culture, the curriculum reflects the values, ideals, and purposes of the society that establishes and controls the school for these reasons:

1. *Teachers themselves are participants in the society and usually have been thoroughly educated in the culture of the group for whom they plan a school program.* They bring to their planning a system of values, concepts, and beliefs that conform, in general, to those of the social group who entrust them with educational responsibilities. The teacher could not, even if he wanted to do so, disavow the value system of his own

culture, or the social group for which he plans an educational program; he would not long remain in a position of responsibility in the school if he seeks to do so.

2. *The school will inculcate the values, ideals, beliefs, traditions, and mores of the social group.* Because the school is a social institution, it must transmit the culture of those who establish it. Émile Durkheim, the renowned sociologist, said:

> Education is the influence exercised by adult generations on those that are not yet ready for social life. Its object is to arouse and to develop in the child a certain number of physical, intellectual and moral states which are demanded of him by both the political society as a whole and the special milieu for which he is specifically destined.[1]

If the teachers and other curriculum planners fail to carry out the wishes and desires of those in control of the school, they will in due time be replaced. Although we recognize the unequivocal completeness of this social control, several important questions arise which will be considered later.

3. *The school educates its pupils to live in a particular society at a particular time in its group life.* The whole purpose of an educational program is to enable the young to live the good life of the group. How they may best be educated for this end is, of course, the whole matter of aims, objectives, and processes; but the fact that they must be prepared is not debatable. All peoples, as the cultural anthropologists point out,[2] have developed methods of educating their children for social participation and acculturation, varying from the teaching of rituals and ceremonies by the most primitive tribes to the elaborate, comprehensive, and extended systems of schools and other educational institutions found in the nations of the modern world. But the fundamental purpose of all these efforts remains the same: transmission of the value system and modes of behavior and the accumulated knowledge of members, the perpetuation of the culture, and the preparation of the young for life in the group.

4. *The culture shapes pupils' development and personality, and determines their educational needs.* Human beings are the product of nature and nurture—of the interaction of a person possessing innate potentialities, needs, capacities, talents, and motives with an environment that determines the way in which these natural endowments will be directed, satisfied, realized, and developed. For example, the language and the number system the child uses are culturally determined. His status in the

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[1] Émile Durkheim, *Education and Sociology* (translated and with an introduction by Sherwood D. Fox; New York: The Free Press of Glencoe, 1956), p. 71.

[2] George D. Spindler, *Education and Culture* (New York: Holt, Rinehart and Winston, Inc., 1963), Part III.

family and his relation to his parents and brothers and sisters are social conditions. In fact, his whole life is social. Of special significance to the teacher is the concept of developmental tasks, discussed in Chapter 2.

Occupational patterns are another aspect of the interaction of innateness and environment: what preoccupational courses and vocational training courses a school teaches are closely related to social factors.

5. *Curriculum planning and teaching should take account of the social as well as the innate aspects of pupil motivation.* Motives, purposes, drives, self-concepts, and aspirations are shaped and directed by social factors. What is significant to a pupil, what gives meaning to his learning experiences is largely socially determined. And these drives are, of course, the basis for effective teaching.

6. *The relative importance of the knowledge, understandings, and concepts to be learned by the young is culturally determined.* Knowledge is, of course, the output of the members of the social group. The knowledge extant at any given time and place is due to the efforts of the social group, and the relative importance assigned to these elements of knowledge is culturally determined. In transmitting this body of knowledge to the young, the teacher himself must master it, or at least that part of it for which he is held responsible, but he must also know the relative importance of knowledge in today's society so that proper selection may be made from among all knowledge in existence.

SOME ISSUES AND PROBLEMS IN THE SOCIAL CONTROL OF THE SCHOOLS IN THE AMERICAN DEMOCRACY

Inasmuch as the school is irrevocably and indisputably a social agency and is established solely to carry out defined aims and purposes, the curriculum planner is confronted by a number of very important issues. Some of the more significant ones are discussed briefly in the following sections.

The Influence of the School in Cultural Change

1. Can the schools direct and bring about cultural and social change? If they can, should they? And who should determine the nature of such change? This question is fundamental to a consideration of the school as a social instrumentality. Is the role of the school to be primarily, if not exclusively, one of transmitting to the young the accepted and idealized values, mores, modes of behavior, and standards of conduct of the social group or does it also have responsibilities or at least the freedom to seek to change, presumably to improve, the conduct, actions, and institutions of the society? Or should the school, in addition to fulfilling the function of perpetuation, seek to provide basic knowledge, methods of inquiry, skills in critical thinking, and, similarly, to prepare the young so that

they possess the intellectual ability, the skill, and the desire to improve the conduct, modes of living, attitudes, and social institutions and arrangements of the group in directions that they as members of the society collectively and independently determine at some future time? The curriculum maker must take a position on this basic issue in many of the important decisions he makes in selecting aims and objectives, content, and teaching methods.

Can the schools bring about specific changes in the value and basic behavioral patterns of a people? In our opinion, this is possible only to a limited extent, and then only in the types of behavior that fall within basic structures determined by the social group and that adhere to fundamental patterns of belief already accepted by the citizens. And the process of change is long and arduous; the change agent must subject the individual to extended periods of instruction and contact with models who exemplify the new value patterns in living, or use a traumatic, overwhelming, all-out assault on cultural patterns, as in war or periods of great social crisis.[3]

Peck, in his research on character development, concludes: "In short, if character be defined in terms of powerful, emotion-laden attitudes, as well as action patterns that tend to become habituated, the evidence indicates that there is indeed such a thing as individual character, and that it tends to persist through the years."[4] And character, according to him, is primarily the product of family influences.

As to the role of the school in personality development, Peck believes that "the Prairie City schools seem less to shape character than to crystallize and throw into sharper contrast the punishments for undesirable behavior and the rewards for proper behavior."[5]

Peck's position on the stability of the personality and character of the individual is accepted by many cultural anthropologists and sociologists also with respect to the enduring nature of the value patterns and modes of living of the social group as a whole. Angell maintains that "common values are among the most deep-seated elements of a society and therefore change very slowly through history. What is frequently referred to as national character is evidence of this fact."[6] Talcott Parsons, a renowned sociologist, believes that "there is much evidence that the more important moral patterns are not simply something which we rationally

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[3] See Margaret Mead, *New Lives for Old* (New York: William Morrow & Company, Inc., 1956); also her interesting thesis on cultural evolution in Margaret Mead, *Continuities in Cultural Evolution* (New Haven, Conn.: Yale University Press, 1964).

[4] Robert F. Peck and others, *The Psychology of Character Development* (New York: John Wiley & Sons, Inc., 1960), p. 165.

[5] *Ibid.*, p. 185.

[6] Robert C. Angell, *Free Society and Moral Crisis* (Ann Arbor: University of Michigan Press, 1958), p. 21.

'accept.' They have been inculcated from early childhood and are deeply 'introjected' to form part of the basic structure of the personality itself."[7] And Jules Henry, an anthropologist who has studied American nursery schools, insists that "American classrooms, like educational institutions anywhere, express the values, preoccupations, and fears found in the culture as a whole. School has no choice; it must train the children to fit the culture as it is."[8]

Ottaway, the eminent English educational sociologist, believes that "educational change tends to follow other social changes, rather than initiate them. . . . Education is a technique which is used by people with a deliberate and conscious aim. When the aim changes the education changes, but the aim has to change first."[9]

Linton, however, would have a much more important role for the teacher:

> The findings of anthropologists prove conclusively that people can be shaped in almost any direction and that culture may assume a multitude of forms. However, they leave unsettled the question of how far the direction of cultural growth and change can be controlled, especially by the teacher. He certainly can be a great deal more than a mere transmitter of the *status quo* but it remains to be seen to what degree he can shape the future of his society. . . . His hope of changing and directing future developments must rest upon two things, a series of minor but intelligently directed changes in existing culture patterns and the inculcation of values whose general acceptance would make for a better society. . . . It is these deep-seated values which provide the essential basis, over and above immediate expediency, by means of which individuals will meet new conditions and develop new patterns for their culture.[10]

Social change is possible; it occurs continuously throughout the world. And the school, as Linton states, can have a part in directing and determining the nature of such change. Let us examine its role and responsibilities in serving as a change agent for at least some of the basic factors that determine human behavior.

Provide a Base for Discretionary Behavior. First, the school should recognize that the social group as a whole has not agreed on a set of behavior patterns and modes of conduct that are to be rigidly practiced by the members of the social group in many response situations. Behavior in a vast number of social conditions and stimulus situations is discretionary, within the broad limits of ethical conduct that confine all acts of the people to permitted modes of response. These areas of discretionary behavior are extensive, particularly in a country with such a diverse population as the United States and such a variety of environmental conditions.[11] In fact, as sociologists and cultural anthropologists point out, the values and cultural patterns which citizens generally agree are essential conditions of life in the social group are limited to a relatively few, but highly important, basic beliefs.

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[7] Talcott Parsons, *Essays in Sociological Theory* (rev. ed.; New York: The Free Press of Glencoe, 1954), pp. 73–74.

[8] Jules Henry, *Culture against Man* (New York: Random House, Inc., 1963), p. 287.

[9] A. K. C. Ottaway, *Education and Society* (London: Routledge & Kegan Paul, Ltd., 1953), p. 12.

[10] Ralph Linton, "Potential Contributions of Cultural Anthropology to Teacher Education," in *Culture and Personality* (Washington, D.C.; American Council on Education, 1941), pp. 14–16.

The common set of values to be taught to all children and the forms of behavior to be required of all citizens are indeed limited. Linton maintains that "we are rapidly approaching the point where there will no longer be enough items on which all members of the society agree to provide the culture with form and pattern."[12] And Spindler, an educational anthropologist, states that "the American culture is notable for the conflicts woven into the very fabric of its value system, which is the core of any culture."[13]

However, there are many different types of subgroups within a society, and usually they evolve patterns of social behavior in selected aspects of discretionary action that are enforced on the persons who wish acceptance by the membership, or that, at least, provide certain models of behavior for that particular segment of the total culture.[14] The individual has a great deal of freedom in determining his course of action, not only in the vast realm of discretionary behavior, but in choosing what social subgroup he will associate with and in what way he will be guided by the approved forms of conduct of its members.

Thus, in many acts of day-by-day living, the individual is not restricted by a culturally defined mode of conduct; he must decide his course of action himself, without being bound irrevocably by the standards and habits taught him by the social group and exemplified by socially exalted adult models. He must be true to his culture, of course, acting within its broad definition of conduct. And he must choose his subgroup wisely if he is to be "successful."

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[11] Both Talcott Parsons and the anthropologist Florence Kluckholm elaborate this point of view. See Parsons, *op cit.*, and Florence Kluckholm, "Dominant and Variant Value Orientations," in Clyde Kluckholm, H. A. Murray, and D. M. Schneider (eds.), *Personality in Nature, Society, and Culture* (rev. ed.; New York: Alfred A. Knopf, Inc., 1953), pp. 342–357.

[12] Ralph Linton, *The Study of Man* (New York: Appleton-Century-Crofts, Inc., 1936), p. 284.

[13] George D. Spindler, *The Transmission of American Culture* (Cambridge, Mass.: Harvard University Press, 1960), p. 2.

[14] For a further discussion of this point see Jacob W. Getzels, "Conflict and Role Behavior in the Educational Setting," in W. W. Charters, Jr., and N. L. Gage (eds.), *Readings in the Social Psychology of Education* (Boston: Allyn and Bacon, Inc., 1963), pp. 309–318; and Muzafer Sherif and Carolyn W. Sherif, *Groups in Harmony and Tension* (New York: Harper & Row, Publishers, Inc., 1953).

The responsibility of the school is clear: it must provide the immature with the knowledge, the attitudes, the social dispositions, the adult models, the social sensitivities, and the concerns for group well-being that will enable each individual, as he grows and matures, to live in consonance with the fundamental values of the culture and also to enhance the character of group living. The family as well as other social agencies will also participate in this process, but the school will primarily be held responsible for those things it can best do in cultural transmission. These, as Linton so well told us, are to guide the child in the selection of those patterns of behavior in which discretion is permitted; and second, to be certain that he understands fully and accepts wholeheartedly those fundamental and underlying beliefs, values, and ideals that characterize the culture.

We recognize that the curriculum planner is forced, by the nature of social control, to base his choice making on the value structure overwhelmingly approved by those who control the schools, community by community, and school by school. He will need to determine the areas of behavior in which discretion is permitted, as well as those in which the accepted mode is fixed, and plan his educational program accordingly. But in planning the curriculum and in teaching children, the educator must recognize the diversity of American life as well as the marked variaction in value systems in these manifold discretionary aspects of behavior.

Inculcate Fundamental Values. A second responsibility of the schools in transmitting social beliefs and values, and one closely related to the matters just discussed, is to develop among pupils a full understanding of our fundamental values and what they mean in application to the acts of day-by-day behavior. All Americans believe in the equality of man. But how should a school apply this concept in determining membership in the school pep club? Is "right to work" labor legislation proper action on the part of a legislature? What does our belief in the dignity of man mean in the formulation of public housing policies? What is the place of official censorship in relation to individual freedom and responsibility?

Although the pupil may acquire most of his basic character and personality traits, within any innate predispositions and limitations, from parents, peers, and models and usually quite early in life,[15] he still must mature, and in the process of maturation, the school, as well as many other social agencies, has an important function to perform. Recognition of nuances of meaning, definition of ethical behavior in various types of response situations, and the development of attitudes that give concrete expression to cultural values are within the potentialities of social education.

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[15] Benjamin S. Bloom, *Stability and Change in Human Characteristics* (New York: John Wiley & Sons, Inc., 1964).

Surrogate for the Family. A third responsibility of the school is to take the place of the family in the inculcation of values, beliefs, and behavior patterns when the home, for one reason or another, has abrogated this function, and to seek to change value patterns and behavior when the child has been the victim of an evil home influence. As Peck states in his research report,[16] this is a very difficult and arduous undertaking, but there is evidence that it can be done. Highly skilled teachers and clinicians can salvage the immoral and the seriously maladjusted child, but only over a period of time. In cooperation with other agencies, the school undoubtedly will need to accept this responsibility for some children.

Support Social Change. Fourth, the school can give support to parents and people in general in their efforts to guide children in the development of personality and character. Societies must, and do, change patterns of conduct. Few, if any, societies are closed—certainly not the American nation. The fact that significant changes in value patterns and character have not occurred frequently is not to say that they are impossible to accomplish. We, as a society, can direct change—we do so continuously. But it is a challenge that the entire social group must undertake.

Political, social, cultural, and economic conditions in the world today compel a nation to modify markedly, often in a relatively short period of time, substantial aspects of its mode of living, some of its social institutions, and facets of its cultural patterns, although the fundamental moral values of the society should remain inviolate. It should be apparent to any curriculum planner, as it certainly is to Margaret Mead that "no one will live all his life in the world into which he was born, and no one will die in the world in which he worked in his maturity."[17] Will the school accept a responsibility for guiding and directing such social changes?

Who Runs the Schools?

2. Who runs the schools? Who determines what the schools will teach? Obviously, as was stated previously in this chapter, the social group ultimately determines what the program of education in the schools is to be. But this concept needs elaboration.[18]

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[16] Peck, *op. cit.*, pp. 190–200.

[17] Margaret Mead, "Thinking Ahead: Why Is Education Obsolete?" *Harvard Business Review*, 36:34 (November–December, 1958).

[18] Talcott Parsons contributes significantly to a deeper consideration of this subject and related topics in *Structure and Process in Modern Societies* (New York: The Free Press of Glencoe, 1960). See especially Chaps. 2, 5, 6, and 8.

How does the social group exercise control over the school? In the United States, by a constitutional or legislative act, legal control over the schools is vested in the legislature of the respective states, which, in turn, delegates prescribed responsibilities and duties to a state educational agency and, except in Hawaii, to local school districts. In some matters, considered to be of great importance in the education of the young, the legislature, as an agency representing all the citizens of a state, determines the nature of the schooling to be provided; in others, it empowers a state agency to act under its jurisdiction; finally, it grants a large measure of decision making to the board of education of the local school district, trusting it to achieve desired social ends. The board is usually elected by qualified citizens or appointed by elected officials. Thus, by the typical American process of representative government, the citizens choose those from among themselves who will officially determine school policies and programs within the powers granted the local district. If the citizens approve the decisions and other actions of the members of the board, these representatives will receive the approbation of the citizens—or at least no strong dissent will be heard—and they may be re-elected to the office; if the citizens do not approve, the members may be criticized, harassed, subjected to court action, recalled, or defeated if they seek re-election. Control is through election to office and by social, economic, and political action of one form or another.[19]

What does a board of education consider when it makes decisions about the school curriculum and other matters of educational policy? Many factors, of course, but we believe that the most important influence in a board's decision making is its superintendent of schools. He is usually the board's trusted employee, a specialist in educational planning and administration whose principal responsibility is to advise the board of education on policies, plans, and programs. The board decides whether to accept, modify, or reject his recommendations, but it is the superintendent of schools who in most systems initiates and guides the consideration of the basic policy and program.

In many matters of curriculum making, the board, by overt action or simply by failure to consider them, permits and expects the superintendent and the school staff to make decisions, develop and execute plans, determine teaching methods, and, in brief, "administer" the schools and educate pupils. The actual subjects offered, activities sponsored, length of school periods, assignment of teachers, and many equally important curriculum matters are not referred to the board for action at all. The professional staff under the leadership of the superintendent of schools has a large measure of discretion in curriculum making within the limitations imposed by law, regulations of state agencies, and court decisions. In such matters they literally "run" the schools. It is sheer nonsense to maintain that the social group or its designated representatives "run" the schools in the sense of determining what shall constitute the daily learning experiences provided children. This is a responsibility discharged by the professional staff of the school, using whatever processes of decision making have been established by the superintendent of schools. No school administrator, curriculum director, principal, or teacher can escape responsibility by meekly claiming that "we are simply giving the people what they want." The fact is that "the people" are rarely asked "what they want," nor would it be feasible and appropriate to do so in most curriculum matters.

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[19] Ralph B. Kimbrough, *Political Power and Educational Decision-Making* (Chicago: Rand McNally & Company, 1964); and Roald Campbell, "The Superintendent—His Role and Professional Status," *Teachers College Record*, 65:671–683 (May, 1964).

This is not to say that ultimately the people do not exercise control over the schools. But it is a gross control, based on actions of a political nature, and it relates to general policies and the implementation of broad principles. The people do exercise a veto over the acts of the educator. If the administrator, curriculum director, or teacher makes decisions that offend the social group, he is criticized, ridiculed, or dismissed—all appropriate methods of social control in a democratic society. If he makes plans and executes them so that the education of their children is highly pleasing to the citizens, he is lionized, lauded, honored—and re-employed.

Also, in considering this matter, it must be recognized that educators themselves are members of the social group, and that they will utilize a value system in decision making that is generally consistent with the basic beliefs of the people who control the school system. The board periodically and somewhat systematically reviews and evaluates the broad structure of the curriculum so that teachers and other curriculum planners know the reactions of the public, at least as reflected in the views of their chosen representatives, to the major curriculum decisions they make.

The social group also exercises a general control over the acts of the educator by determining the amount of money to be made available for support of the schools. Tax levies, bonds, millage levies, and revenue sources of other types are usually subject to a direct vote of the people, or to control by the legislative body, and the vote reflects in part, at least, the people's support of the educators' decisions.

In summary, as we analyze the question of who runs the school in this country, it seems to us that teachers and their fellow staff members, using whatever processes are established in each school system, make decisions within legal limitations about the organization, structure, curriculum, program, and teaching practices to be used in educating the children of a community; they then proceed to carry out these decisions in schools established and operated by the legally authorized representatives of the social group. The citizens sit in judgment on these plans and actions, tolerating them, lauding them, or criticizing them and protesting their use. By means of group social pressure, applied in many ways in a democracy, they encourage the professional staff to continue, to modify, or to cancel the programs planned.

The responsibility for decision making is of utmost importance to the planners of the curriculum. If the task of the curriculum worker is conceived as that of providing an educational program which has already met the approval of the citizens, then traditionalism prevails, and little effort is devoted to planning. Established programs are simply continued without question. On the other hand, if curriculum planning is believed to be a dynamic effort of teachers to improve the program for the education of children, the curriculum worker has important responsibilities. He must be a creative, imaginative person, possessing great understanding of pupils, of social aims and values, and of social trends and developments. He must be a scholar, an experimenter, an innovator, an evaluator, and a creator. If the areas of discretion are meager and freedom of action is limited, the staff should seek to develop among the citizens an attitude of trust and confidence, so that change in the educational program becomes possible in the years ahead.

Who Speaks for the Citizens?

3. Who speaks for the citizens? Sooner or later the curriculum planner must subject his educational program to public scrutiny and evaluation. Whose judgment should he respect? Whose evaluations will guide him in future actions? Who constitutes the jury in rendering a verdict on the acceptability of his programs, policies, and plans? At the local level, the board of education has that responsibility. But many products of school planning are never brought directly to the board of education for official action. Moreover, school administrators seldom wish to present a proposal to a board for action unless they feel reasonably sure that it will act favorably. The school must receive the support of the community; otherwise, conflict results. But who is the community? In light of the fact that there are subcultural groups or a variety of "publics" in a community, how can the educator determine what the citizens as a community of people will support, tolerate, or reject?

Sociologists have given us some insight into the nature of community leadership, the characteristics of opinion molders, the composition of the power elite, and the pressures to which a school administrator and other educators are subjected.[20] Studies of conflicts among citizens and educators are also helpful in analyzing the nature of social and political pressures exerted on teachers and administrators, and the ways in which those who seek to exercise some type of veto over decision making by boards of education and school officials make their views known.[21]

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[20] Truman M. Pierce and others, *Community Leadership for Public Education* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1955); Neal C. Gross, *Who Runs Our Schools?* (New York: John Wiley & Sons, Inc., 1958); C. Wright Mills, *The Power Elite* (New York: Oxford University Press, 1956).

The best social climate for educational planning is one in which there is a widespread acceptance of a valid and comprehensive set of beliefs and principles basic to decision making in curriculum planning by both the citizens and the educators. However, if the mutually approved views on education fall short of providing a proper base for planning, the educational program will still be inadequate, even though the social group is not in conflict with the teachers about the education of their children. Hence a major responsibility of the professional educators of a school system is to work with the citizens so that all concerned about the schooling of children develop a better understanding of the characteristics and nature of a good program of education. The educator should constantly work with parents and other citizens in a program of study, analysis, and definition of educational principles and issues. Examples of such programs are abundant.[22] An enlightened citizenry, with as extensive a base among the people as can be obtained and a competent, forward-looking school staff working together cooperatively provide the best conditions for educational planning in a community.

Why Do We Have Criticism of the Schools

4. Why do we have criticism of the schools? If social control over the schools is as inexorable as has been stated, are not school programs and policies always in harmony with the beliefs of the citizens, and hence there will be no criticism from these citizens? Adequate social control would seem to obviate criticism.

Criticism appears in two types of situation: In the more common one, the school program is at the time not in accord with the beliefs of subgroups of citizens, and they let their dissatisfaction be known. The educational staff, in exercising its discretionary powers in areas of planning, is carrying out an educational program that is either too "progressive" or too "antiquated" for those constituting school subpublics of the community, state, or nation. Citizens dissatisfied with the program of schooling being provided the children, leaders, or would-be leaders give expression to this discontent. Criticism is one of the social pressures used by the people to narrow the area of discretion, or to force decisions they will approve.

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[21] National Education Association, Commission for the Defense of Democracy through Education, *Levittown, New York,* A Study of Leadership Problems in a Rapidly Developing Community, January, 1962; *Fullerton, California,* May, 1961; *The Pasadena Story,* An Analysis of Some Forces and Factors That Injured a Superior School System, June, 1951 (Washington, D.C.: The Association).

[22] Montgomery County Public Schools, Montgomery County Curriculum Study Committee, *Final Report,* Vol. I and II (Rockville, Md.: The Schools, 1961.

Akron Board of Education, *Citizens' School Seminars* (Akron, Ohio: The Board, 1962).

Board of Education, *What the People of Bloomington, Illinois, Think about Their Public Schools* (Bloomington: The Board, 1952).

Citizens' Survey Committee, *Citizens Plan for the Future of Their Schools,* A Survey of the Champaign County Community Unit Four School System (3 vols.; Urbana: Office of Field Services, University of Illinois, 1956).

The second type of criticism is that of persons who themselves seek to become opinion molders and to shape educational practice. They may be patrons of the school itself, citizens of the larger social group, or educators. Because they do not approve of current local school practices they seek to build a climate of opinion that will cause the teachers of a school to change the program. Thus some of our great educational leaders have been critics, often severe ones, of our schools; many curriculum planners themselves criticize school practice, making such attacks in an effort to mold public opinion for a change. They use criticism in an attempt to guide policy formulation.

Criticism of educational practice is democracy at work; it is the effort of citizens freely to influence decision making. The curriculum worker needs to analyze their views astutely and then decide what position to take on the issues raised.

Variation in Schooling

5. Why does the character and quality of the educational program vary from school to school and from community to community in this country?

This issue is readily explained on the basis of the concepts previously discussed. Variation in the excellence of our schools in this country, which has a common culture of basic values, traditions, and democratic concepts is due, first, to marked differences among the people in the values, points of views, attitudes, and expectations in those social behaviors in which the American people permit discretion. There is no unanimity of belief or expectation in the citizens' views about the ways in which we should educate children—programs, methods, and policies. Citizens, whether living in Maine, California, North Dakota, or Florida, generally share common views on only a few basic and fundamental concepts about the schooling of children. Uniformity in point of view is not demanded nor expected in most matters. Thus variance in the quality of the educational program, assuming some impartial judge is able to rate schools on quality, is the resultant of free choice. In fact, the standards themselves for judging excellence is one of the very items on which agreement is lacking.

Curriculum planners should also recognize that the value structure and the expectations of the people of a community or even of a neighborhood in a city will change during a period of years. Many of the improvements in the schools in recent years have resulted from the demands of parents and citizens; their views about education and their concepts of what the schools should seek to accomplish have changed since the 1940's and early 1950's.

A second cause of variation in excellence is the character of the leaders and, perhaps to a lesser degree, the quality of the teaching staff selected by the representatives of the citizens to be in charge of their schools. The importance of leadership was discussed in previous sections. The points of view, the philosophy, and the concepts about education held by the superintendent of schools and his co-workers result in differences in programs. The curriculum is the outcome of innumerable choices, and the value system of the persons who make these decisions distinguishes the program. If a large measure of discretion resides with the superintendent and his staff, as we believe it inevitably must, the educational program bears the imprint of these professional workers. Because the character of their decisions varies, school programs differ in quality.

A third factor that explains differences among school systems is the variance in tax funds available to support schools. Disparity in the per capita wealth of a community in terms of relative costs of living may account for dissimilarities in the educational program. Evidence from research[23] indicates that there is a relationship between expenditures for education and its quality, but that other factors are also important. The willingness of the citizens to spend for education a part of their financial resources is, of course, a major consideration. The extent of their willingness is, in turn, a function of values and of leadership among both citizens and school administrators. But there are limitations to fulfillment, regardless of desire. An Oxford, Mississippi, cannot match a Scarsdale, New York, in expenditures for schools on the basis of either the absolute amount or the relative amount in terms of costs of living.

These same factors—the beliefs and expectations of the parents of the neighborhood, the character of the school leadership, the insight and vision of the principal and his staff, and the relative amount of money devoted to education in that attendance area—may be correctly used to explain differences in the quality of education from school to school in the same city. Conant's brilliant analysis of the contrasts among schools in the slum areas of large cities and in the adjoining suburban areas, which would largely hold true in comparing schools within a large city itself, reveals the relationship between quality of education and these four sets of conditions.[24] Patricia Sexton presents massive evidence of these disparities in one large city.[25] Nevertheless, the role of leadership in attaining excellence in any school in a city, in spite of the detrimental influence of other factors, is illustrated by the original Higher Horizons Project in the New York City schools.[26]

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[23] National Education Association, Committee on Tax Education and School Finance, *Does Better Education Cost More?* (Washington, D.C.: The Association, 1959); Harold F. Clark, *Cost and Quality in Public Education*, and Jerry Miner, *Social and Economic Factors in Spending for Public Education*, The Economics and Politics of Public Education (Nos. 5 and 11; Syracuse, N.Y.: Syracuse University Press, 1963).

We should also consider this issue with regard to the variation in the quality of schooling among classrooms in the same building. Often the differences are greater here than among schools, or even among communities. Diversity among classrooms in a school almost wholly grow out of variation in teaching patterns, which means differences among the teachers themselves—in their values, competency, personality, character, and behavior patterns. If the American people want quality in education, they must have good teachers.

This discussion of quality in education points out again the tremendous responsibility vested in the curriculum worker. Quality is, in large part, within his control. This is the challenge that faces all of us who teach boys and girls and administer schools—that is, curriculum workers.

Wisdom of Adopting Foreign Educational Practices

6. To what extent should the United States adopt educational practices, structures, and curriculum plans developed in other nations? This chapter's earlier discussion of the societal basis of education should make it evident that no nation will imitate or adopt the policies, structures, and programs of education of another social group. A supposition that this could or should occur is in conflict with the very concept of education as a social instrumentality. Education is indigenous to a culture; no nation will voluntarily import an educational program from another, and it is manifestly absurd to contemplate such an action.[27]

Educators and citizens together should study critically and thoroughly educational practice in other countries of the world, seeking to find plans, methods, and programs that will be useful in improving the schools of this country. Not only is such study to be encouraged, it is a necessity if we as a people are not to become a closed society that resists change and experimentation. Russia has something to contribute to our thinking on the relation of education to national purpose; England, on the education of the intellectually talented; Germany and Finland, on vocational education; the Scandinavian countries, on adult education; and so on for many other countries. But to advocate, as some critics of our present educational program do, that we bodily take over the educational structures of another country, is unrealistic.

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[24] James B. Conant, *Slums and Suburbs* (New York: McGraw-Hill Book Company, Inc., 1961).

[25] Patricia C. Sexton, *Education and Income: Inequalities of Opportunities in Our Public Schools* (New York: The Viking Press, Inc., 1961).

[26] Daniel Schreiber, "Identifying and Developing Able Students from Less Privileged Groups," *High Points*, 40:5–23 (December, 1958).

[27] See Robert Ulich, *The Education of Nations* (Cambridge, Mass.: Harvard University Press, 1961), Chap. 8.

Social Class Structure and Schooling

7. What is the relation of the social class structure in the United States and schooling? This is a very important issue in educational planning and policy making, and one that requires the thoughtful consideration of curriculum workers. The relation between social class and many aspects of the educational enterprise has been analyzed and the facts have been documented by many sociologists.[28] Mays, the English sociologist, believes that "experience over many years has demonstrated the paramount importance of the family in developing a child's innate talents. Not only the home but the locality in which it is situated exerts a profound effect on how a child and . . . his parents view schooling and what their general attitude towards higher and further education is likely to be."[29] Our concern, as curriculum planners, is what the school can and

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[28] Bernard Barber, "Social Class Differences in Educational Life Chances," *Teachers College Record*, 63:102–113 (November, 1961).

James S. Coleman, *The Adolescent Society* (New York: The Free Press of Glencoe, 1961).

———, *Social Climates in High School* (U.S. Office of Education, Cooperative Research Monograph, No. 4; Washington, D.C.: Government Printing Office, 1961).

Conant, *op. cit.*

Martin Deutsch and Bert Brown, "Social Influences in Negro-White Intelligence Differences," *Journal of Social Issues*, 20:24–35 (April, 1964).

Robert J. Havighurst, *American Higher Education in the 1960's* (Columbus: Ohio State University Press, 1960).

———, "Social Class and the American School System," in George Z. F. Bereday and Luigi Volpicelli (eds.), *Public Education in America* (New York: Harper & Row, Publishers, Inc., 1958), pp. 79–90.

———, "Social-Class Influence on American Education," in *Social Forces Influencing American Education*, 60th Yearbook, Part II, National Society for the Study of Education (Chicago: University of Chicago Press, 1961).

Robert J. Havighurst and Bernice Neugarten, *Society and Education* (2nd ed.; Boston: Allyn and Bacon, Inc., 1962).

Robert J. Havighurst and others, *Growing Up in River City* (New York: John Wiley & Sons, Inc., 1962).

Harold L. Hodgkinson, *Education in Social and Cultural Perspective* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962).

A. Harry Passow (ed.), *Education in Depressed Areas* (New York: Bureau of Publications, Teachers College, Columbia University, 1963).

Frank Riessman, *The Culturally Deprived Child* (New York: Harper & Row, Publishers, Inc., 1962).

Sexton, *op cit.*

[29] John Barron Mays, "Social Disadvantage and Education," *Educational Research*, 5:2 (November, 1962).

should do about this relationship. We offer only a few, probably obvious, recommendations; most of the references cited in this section consider—in greater depth than can be done here—the implications of this relationship for curriculum making.

First and foremost, the schools provided children in all sections of a city should be the best possible schools for the education of the children who attend them. Boards of education and school officials, accepting the American concept of equality of opportunity, have usually endeavored to attain equality, but their efforts often fall far short of the ideal.

Social class or any factors that contribute to the perpetuation of a fixed social class structure should not be a basis for determining attendance areas for a particular school. Fixing school boundary lines is a very difficult problem for a board of education; nevertheless, these procedures may tend to perpetuate or aggravate social class distinctions. This is one of the aspects of school segregation on the basis of race that has concerned the courts and citizens generally. Correction of the situation plagues the conscientious school administrator; others are seemingly indifferent to this undemocratic feature of school organization.

The obduracy of citizens and school officials in rural areas to a reorganization of school districts is another aspect of the same problem, for many small rural elementary and secondary schools are as responsible for a class type of education as are some city schools. Obviously, the most favored situation in this matter is the smaller city which can assign all its pupils to one secondary school that is large enough to offer a comprehensive program of education.

A policy of open attendance areas in a school system is probably not feasible, particularly in elementary schools, but some procedures must be developed that will minimize the school's role, unwitting as it may be, in the deleterious effects of social class on the education of children. We do not know the solution to the problem but experimentation in this will surely be undertaken. The development of multilevel school plants in educational parks is an example of a promising approach.

Another recommendation for the amelioration of existing class differences in education is to make certain that the curriculum of the school, the methods of teaching, the extraclassroom program of activities, and the policies and regulations of the school contribute to the establishment of equality of opportunity for all. High school officials that permit an in-group of pupils to determine by nomination and secret vote the pupils to be invited to join a school club or other organization are simply ignorant of the impact of social class structure on educational practices or are indifferent to the rights of human beings. Secret clubs, fraternities, and sororities have no place in a high school. Membership fees to school organizations and even admission fees to school activities are seriously questioned on these same grounds of discrimination. American schools may well consider the desirability of providing lunches free to all pupils, just as most states now provide textbooks, and many systems transportation to and from school.

It is primarily in the curriculum itself, however, and in the nature and character of the learning activities provided pupils that the most significant efforts to overcome the detrimental effects of class structure may be made. Thus the purpose of this book is to help curriculum workers plan and carry out an educational program designed to provide excellence for all.

A fourth suggestion for reducing class distinctions is for the school to work with all parents, and particularly those of lower social classes, in the development of a family nurture which will be conducive to maximum educational efforts on the part of the pupil. This matter, too, has been discussed, but it is emphasized in relation to class influence on educational attainments. Courses in home and family living and, as Peck has recommended,[30] a basic course in psychology in the high school would help—provided the instructors of such courses have a keen understanding of the subject and a genuine interest in human behavior—to enlighten the young generation so that their own children may be given the kind of home environment that will stimulate them to take advantage of an educational program that has been made available on a basis of equality of opportunity for all children of the city. Parent study programs of all sorts are also desirable, but too often the very parents who most need such instruction do not participate. One encouraging development, in spite of the contention and controversy engendered, is pinpointed by the United States Commissioner of Education, Francis E. Keppel, who stated that the civil rights demonstrations and the school boycotts of the 1960's brought about an interest in the education of their children by members of disadvantaged social groups that had been impossible to obtain previously.[31]

And, finally, it is suggested that the schools make every effort to overcome the disadvantages of cultural deprivation. Havighurst, particularly, has emphasized this aspect of personal development and its impact on education.[32] The Higher Horizons Project in the New York City schools, already cited, is one of the best examples of a program designed to overcome cultural disadvantages. In recent years, a number of large cities have joined together in a common effort, known as the Great Cities School

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[30] Peck, *op. cit.*, Chap. 10.

[31] Francis Keppel, "Poverty: Target for Education," in *Official Report*, Centennial Conference, American Association of School Administrators, 1964 (Washington, D.C.: The Association, 1964), p. 8.

[32] Robert J. Havighurst, "Problem Children and Social Class Differences in the Schools," an address given at the Thirtieth Annual Summer Conference of the School of Education, University of Michigan, 1959. Mimeographed.

Improvement Program,[33] to widen educational opportunities for disadvantaged children.

But again we remind the curriculum worker that the first and foremost responsibility of the school in enabling every child—regardless of the social status of his family—to develop to the fullest his potentialities and capabilities is to formulate a curriculum as well as to provide an educational structure, the types of learning activities, and a set of school policies that offer those opportunities.

WHAT THE CURRICULUM PLANNER NEEDS TO KNOW ABOUT SOCIETY

The consideration of the relationship of the social group to the schools, and of issues in this relationship in our present-day American society, should have indicated the kinds of knowledge the curriculum planner must have about society if he is to be an insightful and creative educator. These types of knowledge, insights, and understandings may be summarized as follows:

1. *The fundamental beliefs, values, and moral principles of the American people.* A curriculum planner must know the cultural elements of a society that are to be perpetuated; curriculum planning on any other basis would be not only absurd but disastrous to the schools. It is highly desirable, therefore, that basic cultural characteristics be clearly and comprehensively stated as a guide for all curriculum activities and for teaching. These values and beliefs then become the basis for judging the merits of educational programs, structures, and policies.

2. *The mores, traditions, expectations, and value patterns of the citizens of a school community.* Curriculum workers have used many methods and devices for obtaining an insight into the beliefs, aspirations, and expectations of a particular segment of the society. Opinion polls, attitude questionnaires, community surveys, interviews, and similar devices have been used by many faculties. The organization of study and discussion groups, with formal reports of recommendations often being prepared, is an excellent procedure for gaining an insight into points of view, as is participation of lay citizens on curriculum committees. Conferences with parents and meetings of PTA groups contribute to an understanding of local attitudes and desires. Close observation of behavior patterns and social customs of the people of the community is also helpful.

3. *The philosophy, points of view, and recommendations on education of pertinent professional, civic, and patriotic organizations, and of leading authorities and officials in the field of education.* Educators obtain

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[33] Carl A. Marburger, "Considerations for Educational Planning," in Passow, *op. cit.,* pp. 298–321.

such knowledge through reading and studying, attending professional meetings, and participating in professional activities.

4. *Social, economic, and political conditions.* A later section of this chapter discusses some of the national and world developments that impinge on curriculum planning at the present time.

5. *The home and family situation of pupils.* This important consideration in educational planning has already been discussed in the previous chapter as an aspect of pupil characteristics but, of course, it is also a social factor. Methods of studying this aspect of the social situation were discussed in that chapter.

6. *Legal mandates, requirements of superior agencies, and admission requirements of colleges, universities, and other postsecondary educational institutions.* These aspects of social control are well known to and inexorable for teacher, administrator, and board of education in curriculum planning.

7. *The psychology and sociology of cultural change.* Methods of obtaining such insights include study of the relevant literature, participation in study groups and institutes devoted to the subject, and personal involvement in projects that call for changes in social conditions.

SIGNIFICANT SOCIAL TRENDS THAT CURRICULUM WORKERS SHOULD CONSIDER

The curriculum planner, as has already been stated in this chapter, will need to be a keen analyst of the social conditions in which education occurs and in which the pupils will live. Because of the central importance of this curriculum determinant, we discuss here some of the important social developments of our times, and trends already existent that will have important bearing on the educational program of the school.[34]

Acceleration in Population Growth

The population "explosion" is happening not only in the United States but in many other parts of the world. Problems arising from this rapid rise in the number of children to be educated are many—and the curriculum implications great.

The growth in population of the United States, and the acceleration in the rate of growth since 1940, is shown in Figure 3. The projected

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[34] The report of the Project on the Instructional Program of the Public Schools, *Education in a Changing Society,* Richard I. Miller, writer (Washington, D.C.: National Education Association, 1963), and William Van Til, "In a Climate of Change," in *Role of Supervisor and Curriculum Director in a Climate of Change,* 1965 yearbook, Association for Supervision and Curriculum Development (Washington, D.C.: The Association, 1965) also discuss many of these social trends and developments, with implications for curriculum planning and education.

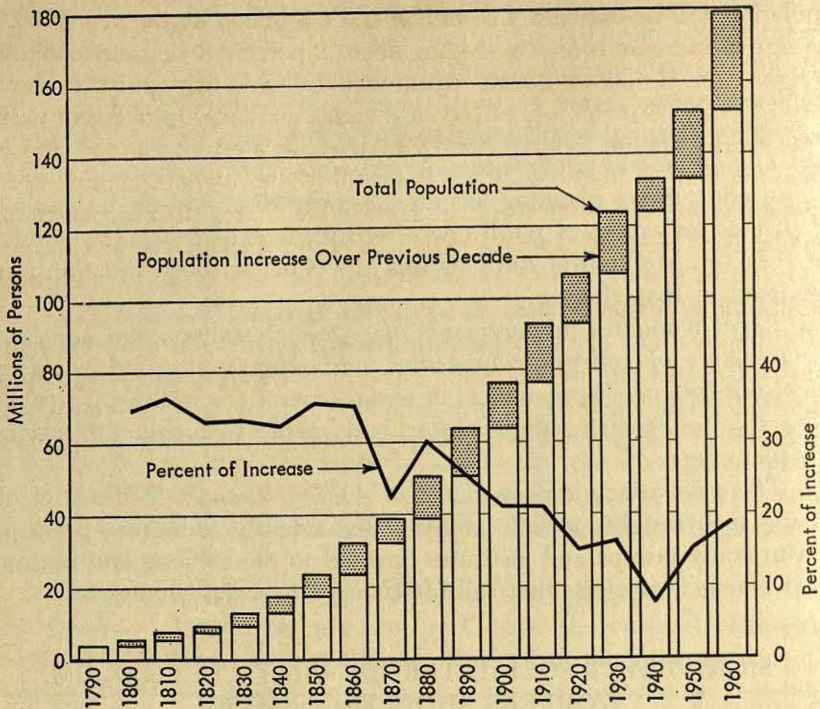

Figure 3: Population of the United States, Decennial Increase, and Percent of Increase: 1790–1960
Source: U. S. Bureau of the Census, *U. S. Census of Population: 1960,* Vol. I, *Characteristics of the Population,* Part I, *United States Summary* (Washington, D.C.: Government Printing Office, 1964), p. S 18, Fig. 19.

population of the country and the projected number of children, youth, and young adults of school and college age to 1985 is shown in Table 2. The authors of the report use four assumptions about fertility rates in future years. The table gives only the figures based on the highest and lowest assumed rates. The minimum projected increase in population during this twenty-year period is 54 million people. The forecasts show a minimum increase in the number of children of elementary school age (the Census Bureau still assumes an 8-4 school organization) of 4.75 million children, almost 2 million in the high school age group, and 3.5 million in the college-age group. The cumulative effect of this population increase is evident in succeeding years, for the authors predict a total population in this country of (Series A) 301 million in 1990, 362 million in 2000, and 438 million in 2010, or (Series D) 262 million, 291 million, and 322 million, respectively.

But the growth in population throughout the world is even more startling. According to estimates prepared by the United Nations, our planet had a population of about 3 billion in mid-1960; it is estimated that its population will be between 4.88 billion and 6.9 billion by the year 2000.[35] The rate of increase is now averaging about 2 percent a year, an astounding figure, for, if maintained, the world would double its population about every 35 years. But the rate of increase varies markedly in different parts of the world. In the industrialized countries of Western Europe and in Japan the rate of increase is relatively low—they would double their populations in 50 to 100 years; in the United States, Russia, Australia, Canada, New Zealand, and Argentina the rate is about average (2 percent), but in less-developed areas of the world the increase would result in a doubling of their populations in 20 to 40 years.[36]

The implications of the population boom for curriculum planning are many. Of immediate and pressing concern is the responsibility of providing adequate facilities for the schooling of children and youth who will enroll in the years ahead. The new buildings that must be planned

TABLE 2

Projections of Total Population of the United States, and of Children of School and College Age, 1965–1985

(Series A and D Fertility Rates)

GROUP AND SERIES	1965	1970	1975	1980	1985
Total population					
Series A[a]	195,129,000	211,430,000	320,415,000	252,056,000	275,622,000
Series D[a]	194,127,000	205,886,000	218,855,000	233,140,000	247,953,000
5 to 13 years					
Series A[a]	35,734,000	37,748,000	41,057,000	46,826,000	52,719,000
Series D[a]	35,734,000	36,751,000	35,533,000	36,984,000	40,447,000
14 to 17 years					
Series A[a]	14,055,000	15,675,000	16,680,000	17,440,000	20,040,000
Series D[a]				15,759,000	15,948,000
18 to 21 years					
Series A[a]	12,073,000	14,278,000	16,017,000	16,790,000	18,074,000
Series D[a]					15,582,000

[a] Series A utilizes the highest estimated fertility rate; Series D, the lowest.

Source: Jacob S. Siegel, Meyer Zitter, and Donald S. Akers, *Projections of the Population of the United States, by Age and Sex, 1964 to 1985,* Current Population Reports, Series P-25, No. 286, July, 1964 (Washington, D.C.: Government Printing Office, 1964), Tables 1 and 3.

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[35] *The Future Growth of the World Population,* United Nations Publication No. ST/SOA/Ser. A/28 (New York: United Nations, 1958).

[36] Philip M. Hauser, "Man and More Men: The Population Prospects," in Ronald Freedman (ed.), *Population: The Vital Revolution* (New York: Doubleday & Company, Inc., 1964).

and constructed provide opportunities for the educator to design school plants that will enable the teaching staff to develop an imaginative and forward-looking educational program. And many school systems are doing just that—examining the total structure of their educational program, and developing some promising new approaches to the education of children.

The population growth throughout the world also suggests that the schools should give greater attention to the problems of international cooperation and relationships, to the methods whereby peace among nations may be maintained in spite of rivalries for more space and for a greater share of the world's resources and products. The people of the United States have unusually large responsibilities in providing leadership among the nations of the world in the solution of some of the most intricate and serious problems they have ever faced. Our schools should provide their pupils with the knowledge, insight, understanding, and attitudes needed to live cooperatively with the other peoples of the world in the years ahead.

And one of the important curriculum decisions facing the schools of this country is the consideration that should be given to the population problem itself. What units of study and what content should be included about population growth, population control, and the like?

Technological and Scientific Advancements

Nuclear fission and fusion, high-speed electronic computers and data sorting and storing machines, supersonic aircraft, space satellites, probes of other planets by spacecraft, automated factories, industrialized farms, preparation of models of the most complex molecules of both inanimate and living things—these are only a few examples of the great scientific and technological developments of recent years. The nations of the world—particularly the highly developed ones, but in terms of the nature, character, and rapidity of change, the underdeveloped nations also—have changed the nature of their social life tremendously within the years since World War II, and they will continue to change, probably at an even accelerated rate in the years ahead.[37] No one, even in the most primitive society of today, will live in the kind of world in which he was born, nor is it likely that he will die in the kind of world in which he lived and worked during his most productive years. Change—change in social institutions and life, change in industrial and business institutions and methods, change in political institutions and arrangements—is a basic condition of life facing the school-age children and youth of today.

The basis for most of these stupendous changes in all aspects of society is research; hence a phenomenon of a modern society is the prominence given to research. Research and scientific investigation of all sorts are important parts of social life today. In 1939, the federal government allocated about $50 million to research; in 1965, the amount was over $10 billion; it is estimated that expenditures by industrial firms for research and development increased from $234 million in 1940 to $7.2 billion in 1957, with over 700,000 scientists and engineers employed in these efforts.[38]

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[37] Francis R. Allen and others, *Technology and Social Change* (New York: Appleton-Century-Crofts, Inc., 1957).

Other ingredients of the present-day scientific revolution are the development and use of the computer for the storage, organization, and retrieval of knowledge; the analysis of data and the solution of problems programmed for computer calculation; and the control of automated machines of production.

Educators must plan a curriculum that takes full account of rapid changes in all aspects of national life. They should teach pupils the knowledge needed to use present-day technology and to continue the acceleration of the rate of change in scientific development, develop attitudes that enable the adults of the future to control and use change for human betterment, and provide the skills and technical competencies that will enable youth to prepare for a place in the world of the future and utilize fully their talents and capabilities. But the most important challenge of all is to develop a concern for human welfare and a personal morality that uses technical achievements for the benefit of mankind.

Expansion of Knowledge

The research and other activities of scholars, inventors, and other specialists throughout the world, as well as the products of technical advancements have resulted in a tremendous increase in the knowledge which man now possesses. Some writers even call it an "explosion" of knowledge. Others speak of "knowledge-generations," the span of time during which the total body of what is known, understood, and used doubles. Although it is exceedingly difficult to make an estimate, some believe that a knowledge-generation is now only ten to twenty-five years. Nevertheless, no person living today can hope to know many things of great importance in human affairs, nor can he be a specialist in more than a quite limited aspect of human life.

The dilemma facing the curriculum planner is apparent. What knowledge out of this vast reservoir should be selected for students to study? What knowledge is of most worth? To what extent should a common program of studies be required of all pupils and to what extent should specialization be encouraged in the common school? At the level of a generalist and at that of a specialist what constitutes the best basis for organizing knowledge for mastery?

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[38] J. Stefan Dupré and Sanford A. Lakoff, *Science and the Nation: Policy and Politics* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962), pp. 9 and 21.

Specialization and the Power Elite

Unquestionably, because of such an expansion in knowledge, the increasing use of technology, and reliance on research, specialization of all kinds has increased markedly. The curriculum worker himself is a specialist, and his role in educational planning and administration is increasing in importance and scope. The specialist is evident in all aspects of public life. Few people, if any, can be highly knowledgeable and proficient in more than one field and its closely related clusters of jobs or areas of study. And as technological advances occur in a person's field of specialization, he must either acquire the new knowledge and understanding essential for competency at the more sophisticated level or lose control of his domain of specialization. Hence the necessity of continual education, or self-renewal, throughout life. A serious lag in self-renewal often means either that the individual is relegated by the inexorableness of the situation to a less responsible role or—and what often happens, especially in social and governmental institutions—that the individual stifles progress, and the agency or enterprise for which he is responsible gets out of gear with interrelated agencies, or falls a victim to competing agencies whose leadership is more alert and informed.

Specialization reduces the nonspecialist to a subordinate role. He feels unequal to a situation in which specialized knowledge is possessed by those in control, or he blunders seriously in trying to match the success of the specialist. Hence he often defers to the specialist and uncritically accepts his judgment and advice. The ordinary citizen must and does rely on the specialist for advice, insight, and understanding, and so he usually accepts the specialist's judgment on matters of significance to him.

This condition in the social life of the advanced nations of the world has given rise to what Mills describes as a power elite,[39] and to the expansion of bureaucratic control by agencies of government from the local police department to the federal government. Inasmuch as the ordinary citizen, regardless of how conscientious or civic-minded he may be, does not possess the specialized knowledge needed to decide rationally many of the problems of social, economic, and political life, the specialist, with a vested interest in the matter, or the bureaucrat, employed to make such decisions, informs him of what should be done. And, sooner or later, the specialist often urges the passage of a law that will give a government official the authority to make decisions on human affairs that are binding on the citizen. The participation of the citizen in political decision making on an insightful and rational basis is difficult to obtain in many aspects of life in modern societies. If the bureaucrat or the specialist who seeks to influence public opinion acts on the assumption that the ordinary citizen is not competent to share in policy making, or that the specialized knowledge necessary for rendering a judgment should not be made available to the citizen, the situation becomes even more serious in a democratic country. Security of the nation, incidentally, would seem to be enhanced, not by denying the citizen essential information, except in those rare situations requiring secrecy, but in giving him the knowledge whereby he can truly participate intelligently in the affairs of state.

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[39] C. Wright Mills, *The Power Elite, op. cit.;* and "The Structure of Power in American Society," in Irving L. Horowitz (ed.), *Power, Politics and People: The Collected Essays of C. Wright Mills* (New York: Oxford University Press, 1963), Chap. 1.

Hence the school has three obligations in the light of these current social developments: (1) to help each pupil to assay, identify, and understand the nature of his capabilities and talents as a basis for his own personal specialization; (2) to provide the kind of education that will enable him to become in due time a specialist in his own right; and (3) to define more fully and to carry out more effectively its program of education for citizenship in a democratic country.

Urbanization of the Nation

The rapid urbanization of the United States is apparent. Just how extensively we are urbanized, and the extent of the shift of the population from rural to urban areas since 1900 is shown in Table 3. Much of this shift, both in actual numbers and in percentage of increase, is to the 212 large metropolitan centers of populations, as designated by the Census Bureau. Gottmann[40] points out that now great cities are being linked together into one large, densely populated urban area along the northeastern seaboard of the United States. He calls this new urban complex "Megalopolis." It contains "one of the largest industrial belts in existence and the greatest financial and political hubs on earth."[41] Other demographers have analyzed the development of metropolitan areas in other parts of the country, and have studied the functions a metropolis serves.[42]

Another phenomenon of urbanization is the marked differentiation in many aspects of social, political, and economic life among the various parts of a metropolitan area. The central core of the area is the old city itself, a considerable part of which constitutes the modern slum, and it remains a slum unless vigorous efforts for renewal are undertaken by the political city that gives its name and prestige to the area; beyond the political city lies a whole cluster of suburban areas, which are now identifiable as residential areas of the middle- and upper-middle-class families, or, in sharp contrast, the fringe slums—areas between the old city and the high-cost residential areas, or beyond them, often clustered around factories built originally far beyond the city limits of any part of the urban area.

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[40] Jean Gottmann, *Megalopolis: The Urbanized Northeastern Seaboard of the United States* (New York: The Twentieth Century Fund, Inc., 1961).

[41] *Ibid.*, p. ix.

[42] Otis D. Duncan and others, *Metropolis and Region* (published for Resources for the Future, Inc., by The Johns Hopkins Press; Baltimore: 1960); and Christopher Tunnard and Boris Pushkarev, *Man-Made America: Chaos or Control* (New Haven, Conn.: Yale University Press, 1963).

TABLE 3

Percent of Population Living in Urban and Rural Areas, United States, 1900–1960

YEAR		URBAN	RURAL
1900		39.7	60.3
1910		45.7	54.3
1920		51.2	48.8
1930		56.2	43.8
1940		56.5	43.5
1950	previous def.	59.6	40.4
	current def.[a]	64.0	36.0
1960[b]	previous def.	63.1	36.9
	current def.	69.9	30.1

[a] Definition of urban and rural modified slightly in 1960; correction applied to 1950 data, also.
[b] Excludes Alaska and Hawaii, to retain comparability

Source: U.S. Bureau of Census, *Census of Population: 1960,* Vol. I, *Character of the Population,* Part A, *Number of Inhabitants* (Washington, D.C.: Government Printing Office, 1961), Table 3.

The rise of the great metropolitan area as the major aspect of urbanization and its subsequent realignment into these three types of neighborhood regions have created the most baffling and complex of educational problems. Marked variations exist in the ability of the various school districts into which these centers of population are subdivided to provide a program of education.

The central or core city, although at a financial disadvantage in comparison with its high-income suburban neighbors, faces one of the most critical of all educational planning problems at the present time—the provision of a quality education for all children. It must deal in full scope with the needs of the socially, economically, and culturally disadvantaged children and youth of its slum areas, a matter we have already considered. On the other hand, although of a different dimension, the high-income suburban areas, too, face major educational problems. As

Conant and Gardner both point out, one of these is the pressure on these children to prepare for college,[43] and the attendant distortion this situation produces in the educational program.

Another major educational problem resulting from the development of the metropolitan center is the organization of a suitable and sound structure for educational administration, planning, and financing. Should the whole area constitute one huge school district, perhaps subdivided into administrative subdistricts? Should each identifiable cluster of population, perhaps loosely comprising a community, have its own independent school district? Should each of these community areas have its own school, with responsibility for many aspects of schooling, but be part of an all-encompassing intermediate unit that is responsible for certain common services and aspects of schooling, such as technical education, postsecondary education, curriculum planning, and many special services for exceptional children? The matter has not been resolved.

New Modes of Communication

The third of the "explosions" of recent years, in the metaphors of some writers, is in communications. Television, instantaneous intercontinental voice and television communication by satellite, simple reproduction of written, typed, or printed materials, new techniques of visual presentation, the storage and organization of data and information by electronic methods, and high-speed solution of all sorts of problems and analysis of research data are examples of trends in communication and storage of knowledge.

People throughout the world are affected in many ways by these developments in the transmission and retrieval of knowledge. School children, for example, in any classrooms that wish to cooperate could soon readily and conveniently communicate with each other on a personal basis. Would not a two-way discussion by television between a class of fifth-grade pupils in a school in some city or village of the United States and a comparable class in a school in Japan be exciting? And a rich educational experience for both groups. These new developments in communication affect all our political, social, and economic relationships.

Schools should make full use of the communicative and transmittal devices available for the education of children. Instructional materials centers, staffed by competent people, are desirable in every school system. Curriculum workers should incorporate in the curriculum plans suggestions and recommendations for the use of all sorts of material. And the pupils themselves should study the use, control, and place of communications in the world today.

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[43] Conant, *op. cit.*, and John W. Gardner, *From High School to Job* (reprint from the 1960 Annual Report; New York: Carnegie Corporation of New York, 1960).

Increase in Relationships among Nations

Technological advances in the production of goods, in communications, and in travel, the tremendous increase in population, and the use of interplanetary space have brought about new patterns of relationships among the nations of the world, and have greatly increased the need for cooperation. Travel to and in foreign countries is increasing yearly, business is conducted on an international scope, Common Market arrangements have a profound effect on trade among nations, awareness of the importance of developments in other countries grows, exchange of students is extensive, and a network of television stations may bring a common program simultaneously to all the people of a continent and, already realized, of the world. Another significant fact about the international situation is the widespread efforts of undeveloped nations and of disadvantaged peoples throughout the world to improve their status, economically, educationally, socially, and politically.

Are American children being properly schooled to live in this new, closely knit world of interdependent peoples of many nationalities?

Possibilities of World Destruction

Technology, although contributing so much to the material improvement of living conditions and to the easement of our burdens of providing the necessities of life, has, at the same time, made it possible to produce weapons of war that could destroy nations. Annihilation is now a constant threat to all mankind. Education must do its part to eliminate war; otherwise, schools will have betrayed their social responsibilities in those countries responsible for initiating war, and the very civilization that schools are designed to perpetuate will perish. Education for peaceful living is a necessity in all countries of the world; unilateral efforts in this aspect of cultural inculcation are dangerous to the nation that practices them. Leadership roles in fostering peace throughout the world are desirable, and American schools should educate for such roles.

Cybernation and the Use of Automatic Processes of Production

The use of computers and devices for automating mechanical processes has increased tremendously in recent years in this country. The term "cybernation" designates the whole series of machines and devices and their processes that constitute a sort of continuum from those devices that "automaticlly perform sensing and motor tasks, replacing or improving on human capacities for performing these functions" to the highly sophisticated computers that "perform, very rapidly, routine or complex logical and decision-making tasks, replacing or improving on human capacities for performing these functions."[44] In between are mixed systems in which computers control complicated manufacturing processes on the basis of data automatically fed back to them from the process. Processing and tabulating data for informational and administrative purposes is another example of the middle zone of cybernation.

One of the most significant results of the increased use of automated devices and machines that substitute for human labor and of technological advances is the increase in productivity in the economic sector of American life. The documents comprising the supporting data for the manpower report of the President of the United States to Congress show that "productivity (output per man-hour) in the private economy of the United States rose at an average rate of 2.4 percent a year over the half-century covered by the index, 1909–1963. During the postwar period 1947–1963, the increase averaged 3.0 percent. The increase for the past 3 years, 1960–1963, averaged 3.6 percent."[45]

Increased productivity means, for example, that "in 1963 the economy could have produced 1962's level of Gross National Product of $555 billion with nearly 2 million fewer workers."[46] Obviously, then, every year, unless the increase in productivity should suddenly cease or a decline in output per man-hour should occur—a highly unlikely situation—this nation must increase gross production significantly, reduce drastically the hours each worker devotes to production, face ever higher levels of unemployment, or have a varying mixture of all three of these possibilities.

As is shown in the next section, the greater use of automated machines and processes and computers has altered significantly the nature of the occupational patterns of the American people, not only by changing the nature of jobs that exist in production, but by providing a new cluster of jobs in the manufacture, service, and operation of the machines themselves.[47]

Cybernation poses many problems in our national life. Who is to determine what data and information are to be stored in electronic systems for later use in solving problems for or retrieval in response to requests for information? Will there be competing systems in which other sets of factors are used, or factors are used in different arrange-

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[44] Donald N. Michael, *Cybernation: The Silent Conquest,* A Report to the Center for the Study of Democratic Institutions (Santa Barbara, Calif.: The Center, 1962), p. 5.

[45] The President of the United States and the United States Department of Labor, *Manpower Report of the President* and *A Report on Manpower Requirements, Resources, Utilization and Training: 1964* (Washington, D.C.: Government Printing Office, 1964), p. 46.

[46] *Ibid.,* p. 17.

[47] Robert Theobald, "Cybernation," *Bulletin,* National Association of Secondary-School Principals (No. 295), 48:22–36 (November, 1964).

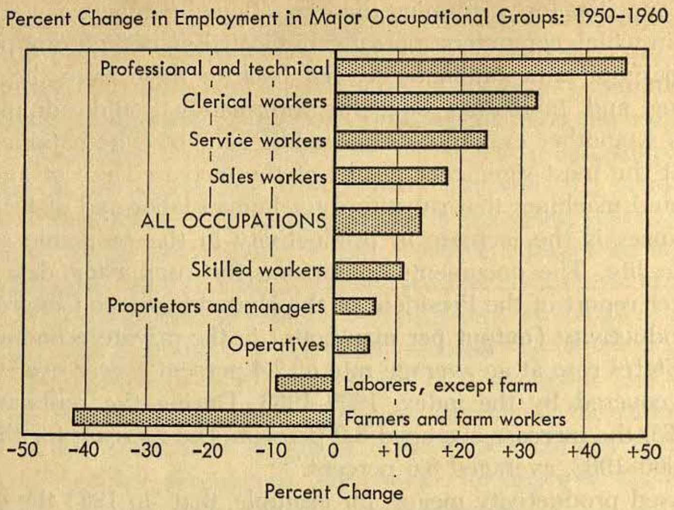

Figure 4: Percent Change in Employment in Major Occupational Groups: 1950–1960.
Source: Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training, 1963 (Washington, D.C.: Government Printing Office, 1963), p. 28.

ments, so that other solutions to problems are proposed? Will the individual in need of information or solutions be at the mercy of a programmer, who determines the ways in which the computer analyzes data or solves problems? Will a feeling of infallibility be attached to computer-determined solutions? Will decision makers recognize fully that computers must have been given instructions by human beings and that people are fallible? We, the citizens, must recognize that computers provide only information, data, and solutions useful in decision making. Policy making is still a human prerogative.[48]

Occupational Patterns and Employment

One of the most significant results of all these technological advances in recent years is the change in the nature of employment in this country. The situation is shown in Figure 4 and Table 4. As Sofokidis and Sullivan point out, "The fastest growth of the labor force is that of technical and professional jobs requiring 16 or more years of schooling. Technician and semiprofessional jobs requiring one, two, or three years beyond high school are the second fastest growing category in the labor force. During the past decade jobs filled by high school graduates rose 30 percent while jobs for those with no secondary school education decreased 25 percent"[49] The Secretary of Labor concludes that "it is obvious that important shifts in manpower requirements are in process, with forced readjustments for large numbers of workers and serious implications for the education and training both of the present work force and of young people still in school."[50]

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[48] For very thought-provoking and challenging statements on this subject see, Lewis Mumford, "The Automation of Knowledge," in G. Kerry Smith (ed.), *Current Issues in Higher Education: 1964* (Washington, D.C.: Association for Higher Education, 1964), pp. 11–21; and Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (Cambridge, Mass.: The Massachusetts Institute of Technology Press, 1965).

TABLE 4

Employment and Projected Employment by Occupational Groups 1960–1975

MAJOR OCCUPATIONAL GROUP	EMPLOYMENT (IN MILLIONS) Actual, 1960	Projected, 1975	PERCENT CHANGE 1960 TO 1975
Professional, technical, and kindred workers	7.5	12.4	65
Managers, officials, and proprietors, except farm	7.1	9.4	32
Clerical and kindred workers	9.8	14.2	45
Sales workers	4.4	5.9	34
Craftsmen, foremen, and kindred workers	8.6	11.2	30
Operatives and kindred workers	12.0	14.2	18
Service workers	8.3	12.5	51
Laborers, except farm and mine	3.7	3.7	—
Farmers, farm managers, laborers, and foremen	5.4	3.9	–28

Source: Manpower Report of the President and *A Report on Manpower Requirements, Resources, Utilization, and Training, 1963* (Washington, D.C.: Government Printing Office, 1963), p. 100.

The shift in occupational patterns, of course, sets essential conditions for the planning of prevocational, vocational, and technical education. Guidance and counseling officials must be thoroughly informed about these trends, and be able to translate their knowledge into sound advice for young people enrolled in school. The nature and types of prevocational and vocational education at the secondary and technical school levels also require thoughtful consideration. Because of the marked changes occurring in both job requirements and employment opportunities, American workers must have as high a degree of adaptability as possible and must posses the basic knowledge, understandings, atti-

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[49] Jeanette H. Sofokidis and Eugenia Sullivan, "A New Look at School Dropouts," *Health, Education, and Welfare Indicators* (April, 1964), p. xiii.

[50] *Manpower Report of the President*, p. 61.

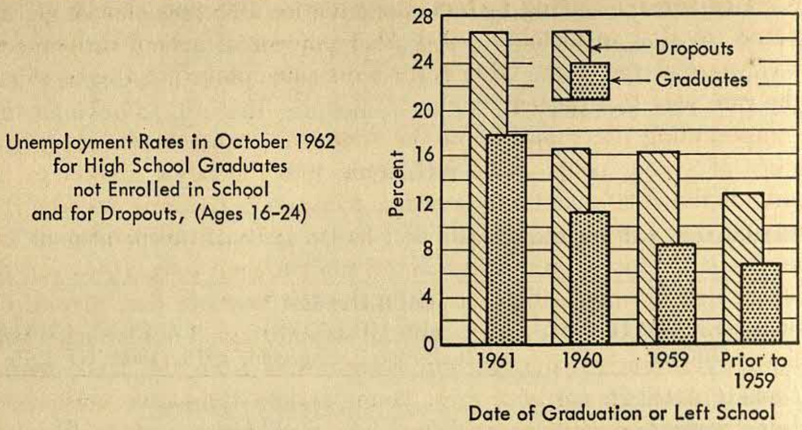

Figure 5: Unemployment Rates for High School Graduates Not Enrolled in School and for Dropouts (Ages 16–24), October, 1962.
Source: U. S. Department of Health, Education, and Welfare, *Health, Education and Welfare Indicators* (Washington, D.C.: Government Printing Office, April 1964), p. xiv.

tudes, and character traits that will enable them to adapt to employment dynamics. Unemployment is a serious problem for many Americans. On the average, during 1964, 3.9 million Americans seeking work were unemployed. This was 5.2 percent of the labor force. Another 2.5 million persons who wanted full-time work were employed only part-time. But the educator is particularly disturbed by the fact that unemployment, which is exceedingly high among young people, is highest of all among school dropouts. The average unemployment rate in 1963, according to age, is as follows:[51]

AGE	UNEMPLOYMENT RATE (IN PERCENT)
18 and 19 years	15.6
20 to 24 years	8.8
25 to 34 years	5.2
35 to 44 years	4.0
45 to 54 years	3.8
55 to 64 years	4.1
65 years and over	4.0

But these high rates for young workers become distressingly high when the person has not completed high school (Figure 5). Sofokidis and Sullivan point out that "as of March, 1962, persons 18 and older who had not completed high school comprised 46 percent of the labor force but accounted for a staggering 63 percent of the total of unemployed."[52] When these two factors of youth and dropout are combined into a common set of self-reinforcing factors, the situation becomes shockingly aggravated, so that in October, 1963, 28.3 percent of school dropouts 16 and 17 years of age in the labor force were unemployed; for ages 18 and 19 the rate was 18.3 percent.[53]

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[51] *Ibid.*, p. 26.

[52] Sofokidis and Sullivan, *op. cit.*, p. xiv.

Compounding the situation for the American people is the staggering number of young people who will come into the labor market in the decade of the 1960's, and will continue to come in the next decade. It is estimated that during the decade of 1960 to 1970, 26 million youth will enter the labor force, an average of 2.6 million each year. However, the numbers will be increasingly larger in the last years of that period. For the years of 1965 to 1970, for example, it will average 3 million each year. Although retirements, deaths, and withdrawals from the labor market will make places for many of these young people, the nation must nevertheless create 12.6 million additional jobs during the period from 1960 to 1970 simply to provide work for these new entrants. The reduction or—hopefully—the elimination of unemployment also necessitates new job opportunities.

The school as a social institution established by society to educate the young for adulthood has responsibilities because of these interrelated conditions. First, it must offer an educational program and establish policies for its own administration and for the instruction of pupils—policies that will enable each child to develop his own potentialities to the fullest; second, its total program should be so comprehensive that all youth will choose to remain in an appropriate school of some kind until full-time attendance is no longer desirable from either an individual or a social standpoint; third, it should provide guidance and counseling services that are broadly conceived and highly beneficial to all children and youth; fourth, it should work with other agencies and social institutions to ameliorate the handicaps of cultural and social deprivation; and fifth, in cooperation with other appropriate educational agencies, it should provide adequate programs of continuing education for all people throughout adulthood.

Fulfilling such responsibilities will require huge additional sums, new types of educational programs, additional curriculums, and possibly some new types of educational institutions.

Alienation of the Self

A much more subtle and difficult-to-define characteristic of our time is the alienation of the individual.[54] That such a condition exists is a fact, but whether alienation has become more serious in our day than in previous periods of our national existence and whether it will increase in intensity in the years ahead is a matter of personal values and judgments. But it is a social phenomenon that the educator should consider in the process of schooling children and youth.

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[53] Vera C. Perrella, "Employment of High School Graduates and Dropouts in 1963," *Monthly Labor Review,* 87:527 (May, 1964).

[54] Gerald Sykes, *Alienation: The Cultural Climate of Our Times* (2 vols.; New York: George Braziller, Inc., 1964).

Alienation is of two basic types: estrangement of the self from society, and estrangement of the person from his selfhood through society. Both are conditions that militate against self-actualization, as Maslow defines this concept.[55] The individual becomes estranged from society by his own choice, such as the delinquent, the criminal, the bohemian, the "beatnik," the heretic, the emotionally disturbed, and the alcoholic. Some persons, particularly artists, intellectuals, and aesthetes, voluntarily choose social isolation or even become exiles. The most serious type of alienation at the present time, however, results from discrimination, such as the social situation confronting the Negroes, the newly arrived immigrants, oppressed ethnic groups, and minority religious groups. Estrangement may also result from circumstances or conditions beyond the control of the individual at the time, the "hard-luck" group, such as the unskilled worker who has been out of work for a long period of time, the share-cropper who is displaced or whose farm becomes unproductive, the coal miner who lives near unprofitable mines, or slum dwellers, particularly teen-agers, who are overwhelmed by the futility of personal efforts.

The other type of alienation is psychological and metaphysical. It may be found in the "organization man," the human link in a system,[56] the individual smothered by "otherness," the detail man, the supersalesman, the business executive, the housewife, the teacher overwhelmed by a mass of youngsters and the demands of the system, the university student who is impelled by parents and social pressure to take a course of study which he finds distasteful or too demanding, the victim of the hidden persuaders, the faceless individual among a mass of people. The psychologically alienated individual is present in person, he performs his job and fulfills its expectations reasonably well, but something in the cultural situation in which he finds himself has sequestered him, has turned him into something other than he wants or ought to be. He is unable to be the master of himself, to realize the full richness of selfhood.

The extent and the depth of alienation is difficult to assess; probably most, if not all, individuals in modern society feel, at times, a degree of estrangement; though for many it is not serious enough to shape their actions markedly; but for some, certainly those who are the victims of discrimination or the inexorableness of economic conditions of livelihood, it is a serious matter.

The schools can seek to give greater meaning to life for each pupil.

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[55] See Chapter 6, page 209.

[56] On the effects of the business system on the employee, see Robert Presthus, *The Organizational Society: An Analysis and a Theory* (New York: Alfred A. Knopf, Inc., 1962).

They can help the immature to move towards greater self-actualization and self-realization. They can cultivate values and contribute to development of meanings and purposes. For many pupils, teachers may, in some small part, become a surrogate for the parents in providing affection, security, and status. And most pointedly of all, they can avoid the aggravation of estrangement through school practices and policies, teaching methods, and curriculum plans.

FOR FURTHER STUDY

Barach, Arnold B., with graphics by Rudolf Modley. *USA and Its Economic Future.* A Twentieth Century Fund Survey. New York: The Macmillan Company, 1964.

An extensive survey of where the American ceonomic system stands today and where it is likely to stand tomorrow. A great deal of factual information is presented in chart and tabular form on many aspects of economic life.

Brookover, Wilbur B., and David Gottlieb. *A Sociology of Education.* 2nd ed. New York: American Book Company, 1964.

One of the outstanding textbooks on the social foundations of education. This edition has chapters on education and social policy, the social control of education, and the school as a social system. The section on education and social change is especially pertinent.

Charters, William W., and N. L. Gage, eds. *Readings in the Social Psychology of Education.* Boston: Allyn and Bacon, Inc., 1963.

This excellent collection of articles contains readings on a number of topics discussed in this chapter. Some of the most pertinent sections comprise readings on extraclassroom influences on students, student relationships, teacher-student interaction, and student motivation and teacher characteristics.

Conant, James B. *Slums and Suburbs.* New York: McGraw-Hill Book Company, Inc., 1961.

Commentary on the influences of the neighborhood on the program and nature of the school, and some recommendations for the curriculum of schools that serve slum and suburban areas of large cities.

Educational Policies Commission. *American Education and the Search for Equal Opportunity.* Washington, D.C.: National Educational Association, 1965.

A significant statement of the necessity of providing equal educational opportunities for all children, regardless of social class, race, or color. Basic principles are presented.

———. *Social Responsibility in a Free Society.* Washington, D.C.: National Education Association, 1963.

Recommends ways in which the school may educate for social responsibility.

Ginzberg, Eli, ed. *Technology and Social Change.* Edited for the Columbia University Seminar of Technology and Social Change. New York: Columbia University Press, 1964.

Five important papers on technology and its impact on the social system.

The effect of technology on the world today, the forces reshaping society, and the sources and rate of growth of productivity are considered.

HODGKINSON, HAROLD L. *Education in Social and Cultural Perspectives.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.

His two chapters on social mobility and education and cultural lag and education are excellent statements.

KIMBROUGH, RALPH B. *Political Power and Educational Decision-Making.* Chicago: Rand McNally & Company, 1964.

A scholarly and challenging study of the decision-making process in local school districts. Considers the centers of power in educational policy making, the nature of the power structure, and the processes by which political forces are effective. An illuminating statement on the social control of the schools.

MEAD, MARGARET. *Continuities in Cultural Evolution.* New Haven, Conn.: Yale University Press, 1964.

A noted anthropologist presents some views on how societies of people change. The role of strategically placed groups of individuals is amplified. She believes that cultural evolution results from novelties created by geniuses with vision.

PASSOW, A. HARRY, ED. *Education in Depressed Areas.* New York: Bureau of Publications, Teachers College, Columbia University, 1963.

A series of excellent papers on many aspects of schooling pupils who live in depressed areas. The three papers on the psychological aspects and the two on the sociological aspects of education in these areas (Parts II and III) are especially helpful.

PROJECT ON THE INSTRUCTIONAL PROGRAM OF THE PUBLIC SCHOOLS. *Education in a Changing Society.* Richard I. Miller, writer. Washington, D.C.: National Education Association, 1963.

One of four volumes that report the conclusions and recommendations of the project. This one considers important social conditions that should shape the educational program of the schools.

SPINDLER, GEORGE D., AND OTHERS. *Education and Culture.* New York: Holt, Rinehart and Winston, Inc., 1963.

This collection of articles provides excellent source material on the schools in a cultural setting. Part II is especially pertinent to the subject matter of this chapter.

TYLER, RALPH W., CHM. *Social Forces Influencing American Education.* 60th Yearbook, Part II, National Society for the Study of Education. Chicago: University of Chicago Press, 1961.

Various authorities consider the relationships of education and politics and education and economic growth, and the influence of demographic, social class, traditional values, teachers' organizations, and mass media on education.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, WELFARE ADMINISTRATION. *Converging Social Trends; Emerging Social Problems.* Welfare Administration Publication No. 6. Washington, D.C.: Government Printing Office, 1964.

Presents in tabular and chart forms a large amount of data on changes in population, the economy, education, and health, and then states some of the social problems that emerge as a result of these changes.

PART 3

THE BASES FOR CURRICULUM PLANNING

CHAPTER 4

The Functions and Aims of the School as Guides for Curriculum Planning

In Part 2 we considered the two fundamental determinants of the educative process: the learners that attend the school, and the social group that establishes the school for educative purposes. Those who plan a curriculum must weave the characteristics of learners and the expectations and demands of the social group into a set of guides for planning. These guides determine the aims of the school. In turn, the aims define the kinds of learning experiences that should be provided pupils and the nature of the subject matter to be studied in carrying forward these activities so that the desired outcomes may be realized. This chapter will discuss the process of formulating aims, and the nature of the aims that give an adequate foundation for the process of schooling and the fulfillment of social goals.

THE RELATIONSHIP OF FUNCTIONS AND AIMS TO CURRICULUM PLANNING

At the outset it is desirable to define and explain certain terms used in this chapter.

Definitions

Functions of the school mean the duties and responsibilities the school assumes—in popular language, the job of the school. The social group that has established a system of schools fixes the basic functions, responsibilities, or tasks to be carried out by the institution. Within this broad definition of function, the persons selected by the society to operate the schools—staffs of state departments of education, boards of education, teachers, and administrators—set the specific functions to be served, either by overt declarations or by decisions made about the educational program and the policies for the administration and management of the schools.

Aims of the school mean the objectives the school proposes to achieve as outcomes of its educational activities. In curriculum planning, we consider *objectives, goals,* and *aims* to be synonymous. There are nuances of meaning for the purist, but these are unimportant for educational planning. All these terms state that something is to be accomplished; that some end is sought. We like to use the word "aim" in a broad, generic sense. in which a statement of aims of the school determines the parameters of schooling. For describing the great variety of pupil behaviors the school seeks to elicit and the personality structures it seeks to develop, we like the term "desired outcomes" of experience. *Ends-in-view* is also a meaningful phrase, and we will use it interchangeably with "desired outcomes." Both refer to the behavioral changes which it is hoped will occur as a result of the educational experiences being provided by the school.

We regard *purposes* of the school as a somewhat more inclusive term that may describe both functions and aims. It states intention, what is hoped to be attained. As such, it can include the duties and responsibilities of the school. For example, an *aim* of the school may be to develop the intellectual capacities of its pupils (an outcome sought); a *function* may be to provide an appropriate education for all children and youth (a duty); a *purpose* may be to enable each pupil to develop his talents and potentialities to the fullest extent possible (an intention).

We will clarify these terms further as we discuss functions and aims of the school in democratic United States.

Necessity for a Delineation of Functions and Aims

As was stated in Chapter 3, society establishes schools because it has certain ends-in-view; it seeks thereby to attain some goals considered meritorious. In fact, schooling in the 1960's in America and in most advanced nations of the world is a major undertaking. Something is desired by those who plan, create, manage, and pay for a system of schools. What? But it is pupils in the schools who are being educated. Their behavior, as is described in Chapter 6, is motivated; each of them will have intentions, some end to be attained by the behavior in which he is engaged. What? Will these two sets of ends-in-view be the same? Will pupils learn what adults in the society think schools were established to foster? How may these two sets of aims be related and fused in a harmonious set of postulates for planning educational experiences? By planning a curriculum. And then guiding the behavior of pupils in these planned curriculum experiences so that the aims of education are attained. And many outcomes not sought ("latent manifestations") may also result.

Curriculum planning, as we state repeatedly in this book, is choice making. The educational experiences in which pupils engage under the direction of the school are the results of many choices made by everyone who has a role in determining the curriculum of the school.

Choice making requires a set of values, some conception of the worthwhileness of a thing, of its desirability. The aims of the school constitute a statement of values about behavioral changes in the young: the changes sought through experiences provided by the school. All behavior is purposeful: it is goal seeking. Aims of education become the goals sought in behavior guided and fostered by the school.

Curriculum planning without goal determination is impossible. The outcome sought by the planner may, for example, be simply to have behavior, experience; if so, that becomes the aim of that small piece of the curriculum. But the aim was sought, it was planned for. And so it is for all planned and directed behavior of pupils in school. The curriculum worker, then, from among the innumerable units of experience which pupils could have in school chooses those it will sponsor. These, in the opinion of the educator, offer the best possibilities for eliciting the kinds of behavioral responses he deems to have value for those participating.

The tremendous responsibility facing the curriculum planner is to select the most worthy aims for schooling and then to plan learning experiences for pupils that promise to provide maximum opportunities for the attainment of these ends-in-view by everyone participating in the planned behavior. All the possible outcomes the school could seek for children have relative degrees of merit. The educator must assign them a value and then decide which outcomes are to be cultivated by the school. Furthermore, he must determine the kinds of behavioral responses of pupils that will be most efficient in attaining these outcomes.

Choice making among a wide range of possible aims is a creative and intellectual undertaking: it requires the utmost skill in critical thinking. The greater the understanding of the curriculum worker, the more extensive his own stock of concepts and generalizations, the broader his own experience, and the richer his own learnings, the more able he will be to weigh these alternatives, to forecast consequences of various courses of action, to test hypotheses, and to choose the best plan for the education of boys and girls.[1] Poor choices of school experiences rob pupils of opportunities for self-fulfillment and self-realization; they decrease opportunities for the social group to live the good life. Bad choices deny the concept of human perfectibility.

THE FUNCTIONS OF THE SCHOOL

Preliminary to the definition of the aims of the school is the determination of the functions the school should serve. As has been stated in this chapter, functions designate the responsibilities of the school, the nature of the task it is assigned by society. The aims of the school grow out of its functions; hence in the process of curriculum planning educators usually proceed directly to the statement of the aims of the school instead of describing the functions it performs. We suggest that it is desirable first to define these functions, and then discuss the aims that will enable the school to fulfill them.

The most significant statement of the functions of the schools in America was made by the Educational Policies Commission, endorsing a publication prepared for it by the eminent historian, Charles A. Beard:

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[1] For more extended discussions of decision-making processes see Frederick J. McDonald, "Educational Psychology," in Van Cleve Morris (ed.), *Becoming an Educator* (Boston: Houghton Mifflin Company, 1963), pp. 124–131; and Irwin D. J. Bross, *Design for Decision* (New York: The Macmillan Company, 1953).

> The primary business of education, in effecting the promises of American democracy, is to guard, cherish, advance, and make available in the life of coming generations the funded and growing wisdom, knowledge, and aspirations of the race. This involves the dissemination of knowledge, the liberation of minds, the development of skills, the promotion of free inquiries, the encouragement of the creative or inventive spirit, and the establishment of wholesome attitudes toward order and change. . . .[2]

The commission also stated that beyond this basic trust the school has other obligations: "It is committed to the maintenance and improvement of American society as now constituted and unfolding, and to the use of knowledge and the practical arts in a manner conducive to these ends."[3]

Three significant statements of the functions of secondary schools have been widely used in the development of programs of secondary education in this country.[4] The curriculum worker will find these lists enlightening and helpful. Although no comparable listing of the functions of the elementary schools has been attempted, educators throughout the history of education have been defining for themselves these responsibilities, and educational literature is replete with such statements.

To assist curriculum workers in formulating a conception of the functions of the common school system (elementary and secondary) of this country in the 1960's, we suggest the following:

The Functions of the Common Schools of America

1. *Universal schooling*: To provide appropriate educational experiences for all children and youth.
2. *Determination of individual talents, capacities, and abilities*: To assist each pupil in ascertaining the nature of his potentialities and of his capabilities for growth and development.
3. *Development of individual potentialities*: To provide the kinds of educational experiences that will enable each pupil to develop his talents and capabilities in socially approved directions to the maximum extent possible.

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[2] Educational Policies Commission, *The Unique Function of Education in American Democracy* (Washington, D.C.: National Education Association, 1937), pp. 77–78.

[3] *Ibid.*, p. 85.

[4] Alexander Inglis, *Principles of Secondary Education* (Boston: Houghton Mifflin Company, 1918), pp. 375–383; 668–669.

Thomas H. Briggs, *Secondary Education* (New York: The Macmillan Company, 1933), pp. 252–288.

William T. Gruhn and Harl R. Douglass, *The Modern Junior High School* (2nd ed., New York: The Ronald Press Company, 1956), pp. 31–32.

4. *Transmission of the cultural heritage*: To teach pupils the basic elements of the accumulated knowledge of the race.

5. *Discovery and systemization of knowledge*: To guide pupils in the process of discovering knowledge and to assist them in organizing knowledge into suitable structures, principles, and generalizations.

6. *Inculcation of values, beliefs, and ideals of the social group*: To provide educational experiences that give pupils an understanding of the values, mores, and traditions of the society, and that will ensure adherence to these values in behavior.

7. *Development of character*: To guide the process of personality and character development so that pupils will be able to live lives personally satisfying to them and to carry on pleasant and humane relationships with other persons.

8. *Preparation for adulthood*: To provide learning experiences that will enable the individual when he assumes an adult role in the society to be economically self-supportive, socially dependable, politically insightful, and morally self-directive.

These functions of the school provide the structure within which the aims of the school, and the program for attainment of these goals, will be determined.

METHODS OF DETERMINING THE AIMS OF THE SCHOOL

How does the curriculum planner formulate his set of functions and aims of the school? An analysis of such statements shows several processes.

A Priori Postulation of the Ultimate Good

Many conceptions of the aims of the school have been formulated deductively by first defining the idealistic nature of man. In fact, all such statements of which we have knowledge make some use of this method to a greater or lesser degree. The essential steps in this process of delineation[5] are, first, the a priori postulation of the good life, the ultimate good, the summum bonum. "The sole criterion," as Phenix says, "in respect to values is what is true, right, and excellent, apart from how satisfactorily personal or group interests are served."[6] With this rationalistic formulation of the destiny of man, one simply uses *his* deductions as the basis for selecting what the school should seek as the behavioral outcomes of the experiences it provides. The process follows the classic steps of deductive logic. The worthwhileness of everything the school does, of its outcomes in pupil behavior is judged by the extent to which pupils achieve this postulated conception of the ultimate good. "Values that emerge in human experience are not in the last analysis determinations of human will, but discoveries of antecedent possibilities."[7] Thus "the *ultimate* ends of education are the same for all men at all times and everywhere."[8]

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[5] For two of the purest examples of this process of postulating aims and curriculum plans for the school, see Philip H. Phenix, *Education and the Common Good* (New York: Harper & Row, Publishers, Inc., 1961); and Pope Pius XI, *Christian Education of Youth*, Encyclical Letter, December 31, 1929 (also published in Rev. Gerald C. Treacy's, *Five Great Encyclicals;* Glea Rock, N.J.: The Paulist Press, 1939).

[6] Phenix, *op. cit.*, p. 12.

The shortcomings of the deductive method of determining educational aims are the difficulties of ever validating the postulated concepts of what constitutes the good life for man in the twentieth century but also the failure of the moralistic philosopher to specify the school experiences which will contribute to pupils' realization of the good life. A young teacher facing thirty active, vigorous second-grade pupils or a teacher of the slow-learning section of English 10 is not given much help by a platitude that "the proper aim of democratic education is to foster dedication to this (universal) truth."[9] The problem facing the teacher is the determination of the kinds of behavior he should elicit in his pupils. If he accepts "dedication to universal truth" as a worthy aim, how does he plan an episode of learning experience in his classroom to attain such an outcome? At that point the idealistic philosopher is busy moralizing on some other subject.

Moreover, whose concepts of the nature of man, of the good life, of ultimate worth is the curriculum worker to use as a guide for planning learning experiences: Hitler's, Lenin's, Christ's, Jefferson's, Pope Pius XI,'s, Dewey's, Plato's, St. Thomas Aquinas', Aristotle's, or, perhaps, more to the point, the superintendent of the local school system's, the president of the board of education's, or his own? What is true and good and beautiful?

Naturalistic Determination of Man's Activities

Man is also the central consideration of this method of defining educational aims, but rather than postulate what man ought to be, this approach considers what man is. Man's nature is not a premise from which to deduce the aims of education, but "a set of *conditions* which limit the range of possible educational aims in order to select the best or most desirable from among those for which man's nature provides a ground."[10] The curriculum planner studies man so that he may know what to plan for his education. Man in all his human complexity is the source of aims of education. Several approaches to the study of man as a source may be identified.

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[7] *Ibid.*, p. 27.

[8] Mortimer J. Adler, "In Defense of the Philosophy of Education," in *Philosophies of Education,* 41st Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1942), p. 221.

[9] Phenix, *op. cit.*, p. 61.

[10] Sidney Hook, "The Ends of Education," *Journal of Educational Sociology,* 18:175–183 (November, 1944).

Empirical Evidence of Man's Self-realization. What conditions in the life of man result in his greatest happiness, his greatest self-satisfaction, his greatest self-fulfillment? The educator, as well as others who have something to do with planning and directing man's activities is constantly examining and analyzing man's behavior so he may generalize his observations in concepts about the kinds of life activities that produce the most satisfying and rewarding human existence. He may note, for example, that some persons enjoy solving difficult problems involving abstract symbolization, returning eagerly to such activities day after day, and declining invitations to engage in other types of behavior; other individuals may play the piano hour after hour, refusing to join friends in other activities. On a broader sweep of contemplation, the educator believes that nations in which all adult citizens may vote for the officials who will govern them are composed of happier and more satisfied people than are those whose officials are appointed by a dictator or inherit their offices. He observes that throughout all recorded history millions have fought and died for the right to be "free" and "independent." He finds that a nation in which everyone has the opportunity to develop at least to some degree his own talents and capabilities, so long as such development does not degrade other human beings, has less violence and less coercion than a nation in which a dictatorial government determines what talents and potentialities the individual may develop.

During the recorded history of mankind, throughout the world, students of human affairs have compiled for us an extensive body of empirical evidence on what best contributes to man's self-realization. Christ's teachings, reported by His disciples, have served the peoples of the entire Western world very adequately, but many philosophers, statesmen, writers, and other scholars have also made significant contributions within this Judeo-Christian ethos.

Empirical evidence is unquestionably the principal basis on which today's educators formulate a set of aims for the learning experiences to be taught in school. The difficulties in this approach are the collection of the evidence and its generalization into concepts generally accepted by those who must make decisions. Empirical evidence on what is most worthwhile for man comes slowly, sometimes only after generations of living under variable sets of conditions. Often new sets of conditions that hold promise for greater human happiness are slow to develop and be adopted. The testing of hypotheses is a very slow and tedious matter and may take generations.

The second problem is to know what hypotheses have been substantiated. Scholars may look at the same evidence and draw different conclusions. This is what is producing much of the controversy in educational circles today, not only in the United States, but in Sweden, France, England, and many other countries. What happens to the people of a country if the society endeavors to educate everyone to a much higher degree than has ever been done in that nation before? What kind of program of education is needed if everyone is to be educated to the maximum degree feasible? A brief reading of current publications from the United States or from these other nations shows the difficulties in generalizing human experience as a basis for the formulation of a set of aims for the schools of the nation.

Third, who is to say what constitute proper ends for man? Is happiness, for example, to be a goal of a society? Is leisure time a laudable goal? Is absence of violence and brutality another?

Social Demands. Educational aims may be based on what the adult members of the society require of the young as they mature into full membership in the society. At this time in the history of the United States, for example, there is almost unanimous agreement among adults that young persons should be able to read English. They are also expected to observe a whole series of social amenities, they are expected to conform to social customs, and they are expected to be loyal to the form of government adopted by the American people. A young adult should be able to perform useful work, and to do a job that meets social approval. Of course, there may be disagreement on what "read," "observe," "conform," "loyal," or "perform" requires in the way of human behavior, but there is at least agreement on certain prescribed behaviors.

The source of social demands as a basis for curriculum planning is, obviously, the categories of social behavior in which the great majority of members of the society engage in public social interaction. In this approach, detailed analytical studies of public activities are necessary for a comprehensive and adequate formulation of educational aims. The cultural anthropologist and the sociologist are the scholars to whom the educator turns for help. But authors, public speakers, statesmen, politicians, PTA officers—in fact, almost anyone who comments on the state of society today—provide clues to educational aims derived from social demands.

The weakness of this approach is its tendency to perpetuate the *status quo*. Education of this sort is conservative: it fosters behavior that makes use of approved responses—new, untested responses (unless one of the social demands itself is that the young be taught to be inventive, creative, and venturesome) are not condoned. Moreover, the question arises whether the school can or should teach the whole gamut of behaviors practiced by the social group in its public actions. If selection is to be made, as it must be, on what grounds? Who chooses what is to be taught? And what behaviors constitute the subject matter of the curriculum? How do the schools educate the young to live in a changing world if only social demands are to be served?

Needs, Problems, and Interests of the Learners. This method of determining the nature of educational experiences to be sponsored by the school was one of the principal characteristics of the progressive education movement in the 1930's and 1940's.[11] "Progressive" educators, converting to their own ends Dewey's concepts of motivation as a basis for learning while crowding under his tent of philosophical constructs for the reformation of education in America, made extensive lists of the so-called needs of youth, and studies of his problems and anxieties, and filled blackboard after blackboard of lists of his interests and of what he would like to do in school. Most of the lists concocted were without benefit of searching psychological investigation, or of carefully designed field studies.[12]

Curriculum planning was devoted to the selection of units of learning experience that would best enable pupils to gratify these basic needs or to follow their interests, or both. A gratified youngster, these educators insisted, would have attained the basic aims of education—self-realization, self-fulfillment, citizenship, health, home membership, ethical character, and the like—and the learning activities that gave him an opportunity to develop further his interests would be most efficient.[13] Gratification of basic human needs and the cultivation of personal interests had a happy marriage under the umbrella of progressive education. As Cremin points out,[14] the marriage dissolved when the umbrella was suddenly torn to shreds by new demands made on the schools by the social group.

There are four shortcomings of this approach: it perpetuates the status quo; interests are themselves in part a product of education; the basic needs of human beings have not yet been fully defined by psychological research; and behavior outside the school has a far greater role in need gratification, whatever may be the needs of human beings, than has school experiences. The most serious shortcoming, educationally, is the fact that this approach, like that based on social demands, is strongly oriented to the maintenance of society as it is now constituted. Educating the young to seek self-fulfillment in life as it is, in seeking adjustment to life's conditions as they now exist, is a social concept that reduces the potentialities for basic changes in society. The "life-adjusted" individual, as this concept of education was developed in the 1940's, is the person who is happy and gets along well with people in the life of the social group as it is now lived.

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[11] An outstanding study of this movement and the educational beliefs of its proponents is Lawrence Cremin, *The Transformation of the School* (New York: Harper & Row, Publishers, Inc., 1961).

[12] The culmination of much of this effort is the report of the Commission on the Secondary School Curriculum of the Progressive Education Association, *Reorganizing Secondary Education*, V. T. Thayer, Caroline Zachry, and Ruth Kotinsky, members (New York: Appleton-Century-Crofts, Inc., 1939).

[13] A brilliant discussion of this approach to curriculum planning is Harold B. Alberty and Elsie J. Alberty, *Reorganizing the High-School Curriculum* (4th ed.; New York: The Macmillan Company, 1962), Chap. 4.

[14] Cremin, *op. cit.*, Chap. 9.

It is not a dynamic conception, an educational process for social growth; rather, it is aimed only at individual growth within predetermined patterns of conduct and behavior.

Analysis of the Activities of People. This method of defining educational aims has its roots in the scientific movement that swept educational circles beginning in the early part of the 1900's. The invention of new biometric methods of analyzing data, the preparation of standardized tests of achievement, the development of measures of what came to be called intelligence, and surveys of educational practice, using quantitative methods whenever possible, represented efforts to use the methods of science in educational planning and policy making. Studies of retardation, dropout, the selective character of the high school, age-grade distributions, and the low levels of achievement in many schools—even judged by standards based on an assumed normal school population—resulted in a rather extensive overhauling of many educational programs of the day.

In direct application to curriculum planning, the scientific movement in education in these earlier years took the form of a study of the activities of people, both school pupils themselves and adults. The rationale of this approach was the determination of what people actually do in their day-by-day living, and then the development of learning experiences in school that would "teach pupils to do better the desirable things that they are likely to do anyway."[15] Thus, Thorndike tabulated the frequency with which people used 4,565,000 words, and the grade levels at which pupils most commonly used them. From these studies of usage, he developed a word list, which to this day is used as a basis for determining the spelling words taught in school and the words to be included in graded sets of readers at each level. Other researchers determined the arithmetic processes used by sales clerks, the types of computations made by parents, the social problems identified by news items—activities that would have significance for the determination of what the child should be taught in school. The method has been used to determine the contents of whole series of school textbooks, particularly in the social studies, science, and health, and it is the principal method still used to determine the school curriculum for vocational and trade courses. Job analysis of the duties and activities of workers is a significant factor in the planning of courses, laboratory work, and practical work in most professional colleges today.

But as is true of all educational experiences that are based on adjustment, or adaptation to environmental conditions, a curriculum in which the outcomes sought are abilities to respond to environmental conditions as they now exist is designed to perpetuate the *status quo*. It does not educate for new conditions, for new environmental factors, for a changed world except, of course, as generalizations and concepts deduced in the process of learning—and many will be—are useful in new situations. The basic orientation of the school, nevertheless, is to conditions as they now exist. The secretary of the 1930's was trained to type, take dictation, file, and do similar duties as they were then done in offices. She was not trained to use dictating machines, high-speed computers, copy reproducers, inter-office communication systems, closed-circuit television, and the like. She may have been able to make an easy transition to the use of these new pieces of equipment, however, if she had been helped to form a lot of valid generalizations and concepts about business practices and about human affairs. She would, of course, have to learn at the time the specific skills needed to use these new machines.

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[15] Briggs, *op. cit.*, p. 258.

The most serious weakness of this approach is illustrated by the graded series of readers that came into vogue in the elementary schools. In general, all the pupils of a grade read the same books, learned the same words, and progressed at the same rate. When it became apparent that such a curriculum was indeed deadening for many children, the teachers permitted the bright children to race through book after book, but usually designed for the same grade level. It was almost treason to consider using a book of a series before the pupils were promoted to that grade, and to use anything that did not conform to Thorndike's graded word list was sure to produce terrible frustrations and horrifying anxieties in most children. Fortunately, many good teachers soon recognized the evils of such rigid procedures and themselves insisted on flexibility in school practice regardless of usage studies.

Confining pupils' educational experiences to those found to be of interest to a "normal" population included in a survey of interests, habits, or activities not only has all the weaknesses of planning methods based on status surveys but also vitiates all we know about human individuality.

Characteristics of Learners. The aims of the school may be postulated from a definitive study of the developmental and behavioral characteristics of pupils. Extensive research is a prerequisite to the use of such a method. The kinds of information, data, and understandings needed by the curriculum worker for a valid formulation of goals based on this approach include the growth and developmental patterns and characteristics of children and youth in all aspects from birth to adulthood; basic human needs and the developmental tasks of children and adolescence; the fantasies, anxieties, neuroses, and causes of mental pathology; conditions conducive to mental health; drives and motivational patterns; capacities, talents, and potentialities of pupils; values of children and youth; aspirations and self-concepts; and the ways in which learning occurs—in fact, the subject matter of Chapter 2 and Chapter 6. From this extensive array of information about those for whom the learning experiences are planned, the curriculum worker postulates on an inductive basis the kinds of experiences needed to advance the most complete development possible of the individual in terms of his own potentialities, capabilities, and limitations.[16]

A serious difficulty in using this basis for defining the aims of the school is the lack, as was noted in Chapter 2, of a definitive body of knowledge of the characteristics of children and youth, a lack that is almost total when we consider individual pupils in a specific school situation. A further problem arises in the postulation of the kinds of school experience that will best contribute to the maximum development, self-realization, and self-fulfillment of each child. This appears to be a superhuman undertaking.

The defect of this approach lies in the absence of any direction for growth, except further growth itself. And here, of course, we are considering one of the basic issues in education, stated by Dewey many years ago. Dewey held that "the educational process has no end beyond itself; it is its own end. . . . Since in reality there is nothing to which growth is relative save more growth, there is nothing to which education is subordinate save more education."[17]

But Dewey later saw the necessity of some control over the process of individual development:

> It is then the business of the educator to see in what direction an experience is heading. There is no point in his being more mature if, instead of using his greater insight to help organize the conditions of experience of the immature, he throws away his insight. Failure to take the moving force of an experience into account so as to judge and direct it on the ground of what it is moving into means disloyalty to the principle of experience itself.
>
> The greater maturity of experience which should belong to the adult as educator puts him in a position to evaluate each experience of the young in a way in which the one having the less mature experience cannot do.[18]

The educator, Dewey says, is to evaluate the nature of the experience, to see in what direction it is moving. But what criteria is he to use? That becomes the fundamental question in curriculum planning.

Intelligent and Rational Action. Serious difficulties inhere in the attempts of educators to derive aims from either social demands and requirements or from the nature of pupils. Using social demands as a basis for defining the aims of a school necessitates the postulation of the kind of a society in which the individual will live in future years. Either the educator assumes a somewhat static society—one that will be much as it was when the child was being schooled—or he must forecast what the society of the future will be like, a rather risky venture in these times. On the other hand, to derive the aims of education from the nature of the learner, particularly his needs, interests, or concerns, or his developmental traits, ignores the nature of the society in which he lives or may live in the future. To escape this dilemma some educators have proposed that the aims of education should be based on the conditions essential for rational action. Fixed ends for behavior would not be postulated for the educative act, but the goals of education would be found in the cultivation of intelligent behavior, and in the maximization of the human ability to reason, to generalize behavior, to foresee consequences, to weigh alternative courses of action on the basis of some criteria of what is of most worth.

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[16] An example of recommendations for the school curriculum formulated on this basis is E. Paul Torrance, *Guiding Creative Talents* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962).

[17] John Dewey, *Democracy and Education* (New York: The Macmillan Company, 1916), pp. 59–60.

[18] John Dewey, *Experience and Education* (New York: The Macmillan Company, 1938), pp. 31–32.

The basic aim of education would be the cultivation of man, that is, of his unique human capacity for intellectual and rational behavior. "We thus reach a technical definition of education," Dewey said. "It is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience."[19] The purposes of learning experiences provided by the school would be to enable the pupil to define problems of significance to him, to gather as accurate and reliable data as possible, to hypothesize possible courses of action or solutions to the problems, to foresee the consequences of the various possibilities for behavior, to decide the best course of action, and to evaluate outcomes of action. This is the method of rational behavior, which should be the kind of behavior that characterizes man. Dewey, again, said that "the measure of the value of an experience lies in the perception of relationships or continuities to which it leads up."[20] "Hence," he observes, "it is nonsense to talk about the aim of education—or any other undertaking—where conditions do not permit of foresight of results, and do not stimulate a person to look ahead to see what the outcome of a given activity is to be."[21]

The formulation of aims for the educational experiences provided children on the basis of this method of intelligent behavior is difficult. The desired outcomes of school education are processes, but nevertheless behavioral responses, interrelated into molar patterns of response rather than single, perhaps unrelated, responses to stimuli. If learning is behavioral change, then, under this concept, learning becomes a method of responding to a complex, intricate, environmental situation through a series of interrelated acts.

Intelligent behavior as a source for educational aims must be supplemented by the use of other sources also, for behavior is molecular as well as molar, and many aims must be more pedestrian, and more related to single acts of response, as well as welded together into complex patterns. Moreover, as Dewey states, experience must lead up to something. What is this "something"? Here, an insightful, scholarly, but wide-visioned analysis of human behavior to see what ultimately best contributes to the fulfillment of man's potentialities and destinies is essential. The source of "direction" is man's own experience, as distilled through eras of time by the scholars of a society and recognized as valid by its members.

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[19] Dewey, *Democracy and Education*, pp. 89–90.

[20] *Ibid.*, p. 164.

[21] *Ibid.*, p. 118.

THE FORMULATION OF AIMS FOR THE SCHOOL

In practice, the curriculum planner utilizes a number, or even all, of these sources in the determination of the aims which should guide the selection and development of learning experiences in the school. And this is as it should be, for each of them, it seems to us, has validity as one of the bases for defining the goals of the school. The great issue, however, in curriculum planning is the way in which and the extent to which each of these sources is used in the definition of the outcomes to be sought.

Much of the criticism of the school at any one period in its history stems from the weight being given to one factor to the detriment of another. Dewey, for example, in his discussions of the aims of education rejected completely the orientation of the traditional school of his day to aims based on externally imposed concepts of absolute truth.[22] Accepting his point of view as valid, many of his followers—the "progressive educators" of the 1930's—emphasized pupil needs, interests, and concerns as the sources for behavioral outcomes. In turn, a curriculum embodying this concept of aims was subjected to severe criticism in the 1950's by persons holding other educational beliefs. And so it has been throughout the history of education.[23] Teachers have leaned too heavily, in the judgment of critics of current practice, on one or another of the sources for the definition of aims. The critics, whether a Pestalozzi, Franklin, Rousseau, Spencer, Herbart, William James, G. Stanley Hall, John Dewey, M. Maritain, Arthur Bestor, or Vice-Admiral Rickover, all implore the curriculum planner to change sources, yes, in the middle of the stream, or let someone else ride the horse.

The aims of the school, in our opinion, must be based on a careful, insightful, and skillful interrelating of all the sources discussed in the previous section. The formulation of aims for the behavior of another person, such as a teacher deciding what outcomes pupils should achieve in an arithmetic class in the fifth grade, is always a postulation, a judgment of what is desirable, of what is to be the end anticipated. Anyone who guides and directs the behavior of another person must inevitably have some purpose, some outcome, some goal in mind for the behavior. The teacher must understand thoroughly each factor to be considered; he must make a judgment on how they can be brought into consideration in designating the outcomes to be sought; he must actually prepare a statement of the outcomes desired or have them clearly in mind as he plans for and then works with pupils in the experiencing process. But he must recognize that unexpected, or latent, outcomes may also result, and these may be as worthwhile as those deliberately sought. The most complex electronic computer cannot make such a judgment for him (although it may be able to provide at the moment needed analyses and data or retrieve knowledge of great importance in making the judgment).

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[22] See particularly, Dewey, *Democracy and Education*, Chap. 6; "Some Aspects of Modern Education," *School and Society*, 34:583–584 (October, 1931); *Ideals, Aims, and Methods in Education* (London: Sir Isaac Pitman & Sons, Ltd., 1922), pp. 7–9; and *Experience and Education*, Chap. 1.

[23] Cremin, *op. cit.*, particularly Chaps. 1–4, presents a brilliant analysis of just such a revolt.

A Model for the Determination of Aims

Figure 6 represents our conception of the interrelation of the two basic factors in the determination of aims for the school. Through its institutional arrangements for the control of the school the social group determines the direction and character of the growth and development of the immature; the children and youth being educated provide the physiological and psychological controls over the kind and extent of growth and development possible or feasible. Both types of control are basic considerations in curriculum planning.

The Society. Every organized society that establishes schools for the education of the young has evolved some conception, generally accepted by the members of the group, of the good life. The members of the social group may regard the definitions of the good life as divinely ordained and to be found in a holy book or as statements of eternal verities that only the most scholarly may identify for them, or they may believe that the good life is the refinement and distillation of centuries of human experience, and that it is subject to slow but gradual change as societies mature. In all types of societies, there nevertheless exists some conception of a good life for its members.

All social groups demand some direction for growth; they envision the kind of person the young should be and should become as an adult, and this determines the kinds of growth approved and sanctioned by society. Dewey himself said that "the problem is therefore to discover *within* present experience those values that are akin to those which the community prizes, and to cultivate those tendencies that lead in the direction that social demands will take."[24]

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[24] John Dewey, "Comments and Criticisms by Some Educational Leaders in Our Universities," in *The Activity Movement*, 33rd Yearbook, Part II, National Society for the Study of Education (Chicago: University of Chicago Press, 1934), pp. 84–85.

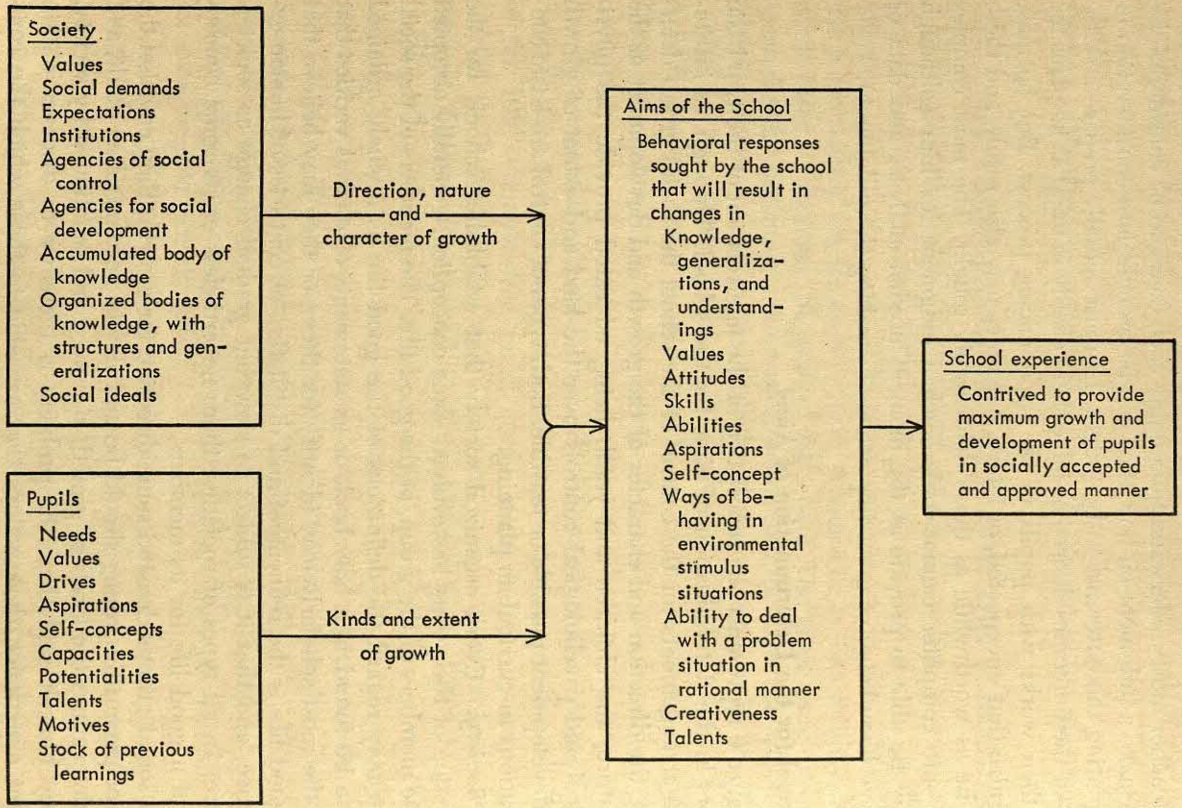
Society
Values
Social demands
Expectations
Institutions
Agencies of social control
Agencies for social development
Accumulated body of knowledge
Organized bodies of knowledge, with structures and generalizations
Social ideals
Pupils
Needs
Values
Drives
Aspirations
Self-concepts
Capacities
Potentialities
Talents
Motives
Stock of previous learnings
Direction, nature and character of growth
Kinds and extent of growth
Aims of the School
Behavioral responses sought by the school that will result in changes in
Knowledge, generalizations, and understandings
Values
Attitudes
Skills
Abilities
Aspirations
Self-concept
Ways of behaving in environmental stimulus situations
Ability to deal with a problem situation in rational manner
Creativeness
Talents
School experience
Contrived to provide maximum growth and development of pupils in socially accepted and approved manner

Figure 6: A Model for the Formulation of Aims for the School

In formulating the aims of the school the curriculum worker must define the essential characteristics of the good life as envisioned for a society by its members and enforced by those in authority over social institutions. These definitions take the form of social ideals, values, demands, and the expectations of the people for a social undertaking. Moreover, the curriculum planner obviously recognizes that the social group has provided him with the bodies of knowledge, the principles, the structures of knowledge, and the generalizations that he must use in educating children to live effectively in that social group.

Pupils. It is the children being educated who, of course, fix the parameters for growth and development. Their capacities, talents, and potentialities set the possibilities for growth and development, and their motivations determine what will be learned. Perceptual patterns, self-concepts and aspirations, values, needs, and drives structure the stimulus patterns for the child, and determine what will have meaning and significance to him.

Aims of the School. As is made clear in the model, we believe that the aims of the school must eventually be stated at the operational level as behavioral responses desired of the learner. Learning is behavioral change, and the teacher can most effectively and efficiently plan and direct educational activities in the school if the outcomes sought in these experiences are expressed in terms of behavior. But a list of all the behavioral changes a school may and will produce as outcomes of the learning experiences it provides would indeed be lengthy and unwieldy for teachers to use in day-by-day planning as well as in the development of a broad curriculum plan for the entire educational program. Bloom and others working with him have therefore developed a taxonomy or an over-all scheme for classifying and correlating objectives.[25] Such a classification greatly facilitates the planning, developing, and evaluating of the units of instruction in the school. They believe that most objectives stated for education may be classified into three categories:

The cognitive domain. Outcomes that involve the acquisition of knowledge and the use of this knowledge in carrying out some intellectual task or solving a problem.

The affective domain. Objectives that emphasize some aspect of feeling, emotional behavior, personal disposition, or acceptance or rejection.

Psychomotor domain. Outcomes that constitute muscular or motor skill, manipulation, or neuromuscular coordination.

Although the individual responds and behaves as a total organism, and although aspects of all three types of behavioral change may be present in an experience, particularly in school activities, such a classification scheme with the subdivisions which these authors propose in their published reports is a useful approach to the formulation of school objectives. The illustrative objectives they list are similar in form and substance to the two sets of objectives cited at length in a later section of this chapter, which suggests that the scholars who have given serious thought to the formulation of educational objectives in recent years, although their taxonomical schemes may differ, agree in general on the manner in which such outcomes should be stated and on those to be sought by the school.

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[25] Benjamin S. Bloom (ed.), *Taxonomy of Educational Objectives: The Classification of Educational Goals,* Handbook I: *Cognitive Domain;* and David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, Handbook II: *Affective Domain* (New York: David McKay Company, Inc., 1956 and 1964).

We ourselves believe it would encourage curriculum planners to view education broadly and facilitate the actual process of stating desired outcomes if the six categories listed below are used. They represent an expansion of the three domains proposed by Bloom and his co-workers, and each one may readily be identified as aspects of one or more of their categories.

A Proposed Taxonomy of Desired Outcomes of School Experience

Knowledges, generalizations, structures, concepts:

What additions to knowledge are sought?

What modifications in principles, concepts, and generalizations should be made as a result of the experience?

What new understandings should be gained?

What new organizations of closely related bodies of knowledge should be undertaken?

What new methods of investigating a field of knowledge or of undertaking new discoveries should be learned?

Values and attitudes:

What changes should be sought in the kinds of behavioral responses the individual will make to a stimulus situation?

What kinds of satisfactions and preferred responses in particular types of environmental situations should be fostered?

Skills and abilities:

What additional types of responses to particular stimulus situations should be developed?

In what ways can behavioral responses to situations be made more efficient and effective?

Self-concepts and aspirations:

What modifications in the learner's concept of himself as an actor in an environmental situation should be cultivated?

What understandings should the individual acquire as a basis for setting aspirations for himself?

What kinds of satisfying responses can the learner have in specific types of situations so they can be generalized into aspirations?

Ways of facing environmental situations and the ability to deal with a problem situation:

What changes should be sought in the ways an individual perceives a situation, and in the stimuli to which he gives attention?

What modifications should be made in the types of responses he makes to a complex environmental situation?

What new kinds of behavioral responses should be sought in particular types of situations?

Talents and capabilities:

What new types of experience should be made available to the pupil so that he may increase the scope of his behavioral responses?

What types of behavior need to be provided so that the child can make a greater variety of responses or responses of a more significant character (as judged by an insightful adult) in particular types of situations in which a complex system of interrelated responses are desirable?

Such a classification of aims of the school and the types of changes in behavior described may be useful in curriculum planning. Certainly, some method of defining the scope and nature of aims is essential.

Classification and Correlation of Aims

A Hierarchy of Aims. A hierarchy of aims of education is desirable in curriculum planning. The first level of aims is the statement of behavior anticipated in stimulus situations—the outcomes desired from school experience. In school practice these will be formulated subject by subject, class by class, and school unit by school unit. Identification of the types and scope of behavior to be sought constitutes the second order of rank. These may be stated as broad categories of experiences which the school should provide, such as is found in the famous "Cardinal Principles of Secondary Education" (see next section), or in Herbert Spencer's delineation of the five areas of living to which education should contribute. Finally, the curriculum planner should postulate a basic statement of the ultimate goal or goals of education in the American democratic society in the present era. Such a statement of the pervading, fundamental end-in-view of the educational process is essential to provide the direction for growth and development and to state the desirable kinds of development.

Statements of aims that define fundamental goals for the school but do not delineate the kinds of behavior to be sought for the attainment of such goals provide little practical assistance to the teacher; on the other hand, behavioral outcomes that are not based on a clearly defined concept of the good life for members of an organized social group at a particular time in history may be invalid, incomplete, and misdirective. The curriculum worker should distill the values, beliefs, and ideals of the society into a comprehensive, valid, meaningful set of concepts of the good life; these will then be one factor in determining the kinds of behavior which the young should acquire in the schools (the pupils themselves as is shown in the model constitute another factor). Guides for the planning and development of school experience will embody statements of the behavioral outcomes to be sought.

Correlation of Aims. Aims for education must provide for the continuity of experience, for an integrated development of the child. Hence any school committee, educational group, or agency that sets about the task of defining aims for schools should envision the nature of the total development of the pupil from kindergarten through the general education period of higher institutions. It may be desirable on occasion to prepare statements of goals for only a segment of schooling, such as the elementary school, social studies in the junior high school, or a course in American civilization at the college level, but those engaged in such a task should, nevertheless, have a clear conception of the total program of education for children, and of the ways in which the particular aspect of the program for which they are responsible is integrated with the total experiential program provided pupils.[26]

In recent years some school systems have established curriculum committees that are charged with the responsibility of planning learning for pupils from kindergarten through the twelfth grade. Aims for a particular area of instruction, such as English and the language arts, are defined for the entire school program and are then assigned to sequential levels of teaching for planning purposes. Subcommittees plan the curriculum for particular levels of the educational program.

One of the most serious deficiencies of curriculum planning, however, is the integration of learning experiences at the college level with the program of the elementary and secondary school. High school graduates who enter college are often required to take courses that repeat large bodies of subject matter they have already studied and to engage in educational activities that represent no additions to their stock of learnings.[27] In recent years, study groups in the field of mathematics and science have endeavored to develop a unified program of study for the secondary school and the college, but little attempt has been made to plan a sequential series of educational experiences from kindergarten through the second year of college. And the situation is no better for students who enter technical schools after completing high school.

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[26] An excellent statement on the methods of providing for the integration of learning experiences is *The Integration of Educational Experiences,* National Society for the Study of Education, 57th Yearbook, Part III (Chicago: University of Chicago Press, 1958), Sec. II.

[27] *General Education in School and College,* a report of a committee of members of the faculties of Andover, Exeter, Lawrenceville, Harvard, Princeton, and Yale (Cambridge, Mass.: Harvard University Press, 1952).

STATEMENTS OF EDUCATIONAL AIMS

In this section we will present some of the statements of aims of schooling that have been widely acclaimed by educators and parents alike, and that have been used extensively by curriculum workers as a basis for planning and teaching.

The Ultimate Aim of the School

In America, in the latter part of the twentieth century, *the basic, all-pervasive aim of the schools is the fullest possible development in socially approved directions of each individual.*

This is our own belief; however, it is desirable to present some other statements of the basic aim of education so that the curriculum worker may compare the points of view prevailing in educational circles today. The Educational Policies Commission said in 1938 that "the general end of education in America at the present time is the fullest possible development of the individual within the framework of our present industrialized democratic society."[28] John W. Gardner, the president of the Carnegie Foundation for Advancement of Teaching, believes that the American people should "accept as an all-encompassing goal the furtherance of individual growth and learning at every age, in every significant situation, in every conceivable way."[29] The group of educators comprising the Educational Policies Commission in 1961 (its membership changes over the years) believes that "the purpose which runs through and strengthens all other educational purposes—the common thread of education—is the development of the ability to think."[30]

In conformity with his naturalistic approach to educational goals, Dewey states that "the central problem of an education based upon experience is to select the kind of present experiences that live fruitfully and creatively in subsequent experience."[31] The method of doing this is "a continuous reconstruction or reorganizing of experience, of such a nature as to increase its recognized meaning in social content, and as to increase the capacity of individuals to act as directive guardians of this reorganization."[32] According to the Catholic Church "the proper and immediate end of Christian education is to cooperate with Divine grace in forming the true and perfect Christian, that is, to form Christ Himself in those regenerated by Baptism."[33] And a group of educators who have sought in recent years to reform common school education believe, in the words of one of their spokesmen, that "the overriding responsibility of the school, the responsibility it cannot shirk without disaster and may not sacrifice to any other aim however worthy, is its responsibility for providing intellectual training."[34]

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[28] Educational Policies Commission, *The Purposes of Education in American Democracy* (Washington, D.C.: National Education Association, 1938), pp. 142–143.

[29] John W. Gardner, *Excellence* (New York: Harper & Row, Publishers, Inc., 1961), pp. 142–143.

[30] Educational Policies Commission, *The Central Purpose of American Education* (Washington, D.C.: National Education Association, 1961), p. 12.

[31] Dewey, *Experience and Education,* p. 17; see also on this concept, Sidney Hook, *Education for Modern Man* (new ed.; New York: Alfred A. Knopf, Inc., 1963), pp. 54–67.

The National Committee for the Project on Instruction of the National Education Association believes that "the instructional program should provide: (a) opportunities for developing the individual potentialities represented in the wide range of differences among people; (b) a common fund of knowledge, values, and skills vital to the welfare of the individual and the nation."[35]

All these statements of the fundamental aim of education simply set a general purpose for the school. Whatever point of view the curriculum worker accepts, he still must eventually define the behavioral outcomes he will seek in specific school experiences.[36]

Aspects of School Experience

The next tier of classification for the aims of the school is the areas of human experience that should be encompassed within the school program. From Benjamin Franklin's classic statement of the kind of education desirable in his academy to the present day, educators have been debating the scope of learning experiences that should be included in the program of the school. Franklin's admonition was, "As to their studies, it would be well if they could be taught *every thing* that is useful, and *every thing* that is ornamental; But Art is long, and their Time is short. It is therefore propos'd that they learn those Things that are likely to be *most useful* and *most ornamental*. Regard being had to the several Professions for which they were intended."[37]

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[32] Dewey, *Democracy and Education*, p. 376.

[33] Pope Pius XI, *op. cit.*

[34] Arthur E. Bestor, *The Restoration of Learning* (New York: Random House, Inc., 1955), p. 33.

[35] Project on the Instructional Program of the Public Schools, *Deciding What to Teach*, Dorothy M. Fraser, writer (Washington, D.C.: National Educational Association, 1963), p. 78.

[36] On this point see Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: University of Chicago Press, 1950), pp. 28–40.

[37] Quoted from Edgar W. Knight and Clifton L. Hall, *Readings in American Educational History* (New York: Appleton-Century-Crofts, Inc., 1951), pp. 76–77.

Herbert Spencer's delineation of the five major types of activities that characterize human life provided a base for much of the change in education that occurred in the latter part of the nineteenth and early part of the twentieth century:

1. Those activities which directly minister to self-preservation
2. Those activities which, by securing the necessaries of life, indirectly minister to self-preservation
3. Those activities which have for their end the rearing and disciplining of offspring
4. Those activities which are involved in the maintenance of proper social and political relations
5. Those miscellaneous activities which make up the leisure part of life devoted to the gratification of tastes and feeling.[38]

Unquestionably, the most famous of these analyses, and the one that has profoundly influenced curriculum development in this country, is the "Cardinal Principles of Secondary Education," published by the Commission on the Reorganization of Secondary Education in 1918. The seven areas of life activities are

1. Health
2. Command of fundamental process
3. Worthy home-membership
4. Vocation
5. Civic education
6. Worthy use of leisure
7. Ethical character.[39]

The Educational Policies Commission, in defining purposes for education, proposed four categories of objectives:

1. The Objectives of Self-Realization
2. The Objectives of Human Relationship
3. The Objectives of Economic Efficiency
4. The Objectives of Civic Responsibility[40]

Nolan Kearney, in a report prepared for the Mid-Century Committee on Outcomes in Elementary Education, identified nine curriculum areas in which behavioral changes should be fostered by the schools:

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[38] Herbert Spencer, *Education: Intellectual, Moral and Physical* (New York: Appleton-Century-Crofts, Inc., 1860), pp. 13–14.

[39] Commission on the Reorganization of Secondary Education, *Cardinal Principles of Secondary Education* (Bureau of Education Bulletin 1918, No. 35; Washington, D.C.: Government Printing Office, 1918), pp. 11–15.

[40] Educational Policies Commission, *The Purposes of Education in American Democracy.*

1. Physical Development, Health and Body Care
2. Individual Social and Emotional Development
3. Ethical Behavior, Standards, Values
4. Social Relations
5. The Social World
6. The Physical World
7. Esthetic Development
8. Communication
9. Quantitative Relationships[41]

In bringing together these analyses of the areas for which school experience should be provided, we propose the following categories for defining behavioral goals:

The realization of self: Behaviors for the

1. Cultivation and development of talents, capabilities, and potentialities
2. Understanding of self
3. Development of character and moral responsibility
4. Wholesome use of leisure time
5. Maintenance of good health
6. Enjoyment of beauty
7. Attainment of success in a vocation

Group relationships: Behaviors for the

8. Discharge of civic responsibilities
9. Enrichment of family life
10. Efficient and effective participation in economic life
11. Development of abilities to work and associate with other persons on a mutually satisfying basis

Behavorial Aims

In the meticulous and arduous job of defining the behavioral outcomes which should be sought through the specific learning experiences provided by the school, teachers and other curriculum workers will need more than a little insight. Some taxonomy or scheme of classification will be helpful in providing clues and categories, but, in the end, it is a matter of choosing among many alternatives.

We believe that two committees of educators, both established under the auspices of the Educational Testing Service, have formulated very acceptable and comprehensive lists of behavioral aims for schooling, and we strongly recommend that curriculum workers use them either for planning purposes or as models for their own delineations.

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[41] Nolan C. Kearney, *Elementary School Objectives* (New York: Russell Sage Foundation, 1953), p. 40. Excerpts are reprinted by permission of the publisher.

In the report prepared by Kearney for the Mid-Century Committee on Outcomes in Elementary Education, nine curriculum areas, cited in the previous section were identified. Four types of behavioral changes are listed for each of these areas. In addition, a statement on the conditions that determine behavioral change in each of the nine areas is also included. The recommended behavioral changes are defined for three levels of schooling: the primary period, the intermediate period, and the upper-grade period. The desired outcomes are given as action statements in textual form. It is feasible here to give only illustrative statements from the book for one area:

Elementary School Objectives

I. Physical development, health, and body care

A. Knowledge and understanding

Primary period (illustrative items)

> He knows how and when to brush his teeth and has some knowledge of how infections are spread. He knows that medicines, the unknown contents of bottles, or things that look edible may be poisonous.

Intermediate period

> He knows the food combinations and vitamins necessary for a wholesome meal. He knows how to handle safely the machines, appliances, and gadgets encountered in home and school living.

Upper-grade period

> He has learned the correct names for parts of the body. He is informed about the effects of alcohol and drugs on the body.

B. Skill and competence

Primary period

> He cares for his own person: hair, teeth, nails, and skin. He dresses himself, managing shoelaces, buttons, zippers, and fasteners.

Intermediate period

> He can play games and engage in the social activities appropriate to his age, sex, and social group.

Upper-grade period

> The child knows elementary lifesaving and safety precautions in water, and is able to administer common measures of first aid.

C. Attitude and interest

Primary period

He is eager to learn new games and try them out, and plays games without fear.

Intermediate period

He is interested in, and accepts, the bodily changes involving growth and sex development; has a desire to be attractive and clean. He is eager to be creative.

Upper-grade period

He adapts successfully to the changes in his body in the direction of physical maturity. He disapproves of the misuse of drugs.

D. Action pattern

Primary period

The child is becoming used to washing his hands before eating and after going to the toilet. He eats wholesome food, chews it well, and accepts it in some variety.

Intermediate period

He assumes responsibility for health and safety of himself and others at work and play. He eats some of the basic foods each day.

Upper-grade period

He recognizes the desirability of seeing a physician and a dentist periodically; of eating nutritious foods as a matter of habit; of eating without rushing or gulping; of heeding his own "fatigue" symptoms.

E. Determining conditions

Primary period

Increasingly, our school systems feel responsible for providing conditions under which simple health rules can be learned at school in the early school years.

Intermediate period

The elementary school has a special responsibility for developing athletic skills adapted to individual needs. This implies a health education program, which includes health services, health instruction, and physical activities.

Upper-grade period

In our modern society, motor training and skills are important in a different sense from that in which they have been important in the past.[42]

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[42] *Ibid.*, pp. 52–59, *passim.*

The Survey Study of Behavioral Outcomes of General Education was directed by Will French. A large committee of educators assisted with the project. Four areas of behavioral competence were designated for high school youth:

1. Attaining Maximum Intellectual Growth and Development
2. Becoming Culturally Oriented and Integrated
3. Maintaining and Improving Physical and Mental Health
4. Becoming Economically Competent

In a two-dimensional model of outcomes, three directions of growth in achieving maturity are identified for each phase of competence:

1. Growth toward Self-Realization
2. Growth toward Desirable Interpersonal Relations in Small (Face-to-Face) Groups
3. Growth toward Effective Membership or Leadership in Large Organizations[43]

It is only feasible here to list the principal goals to be sought in each of the four areas of competency for the three aspects of growth. The curriculum planner should consult the full report for the detailed statement of behaviors to be sought in the secondary school.

Behavioral Outcomes of General Education in High School

I. Growing toward self-realization
   A. Developing behaviors indicative of intellectual self-realization
      1. Improving his study habits, study skills, and other work habits
      2. Improving in his ability to communicate ideas and to recognize and use good standards
      3. Becoming sensitive to, and competent in, the use of logical thinking and problem-solving processes
   B. Developing behaviors indicative of growth toward cultural orientation and integration
      1. Revealing the personal understandings and characteristics of the good citizen
      2. Attaining a perspective on present-day events, cultures, and conditions
      3. Attaining orientation to the physical world and appreciation of what scientific advancements mean to the world
      4. Improving in ability to apply ethical values as gained from religion, philosophy, and direct experience to his own decisions and behavior

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[43] Will French and associates, *Behavioral Goals of General Education in High School* (New York: Russell Sage Foundation, 1957), pp. 88–89. Excerpts are reprinted by permission of the publisher.

        5. Developing esthetic and artistic appreciation
    C. Developing behaviors indicative of growth toward personal mental and physical health
        1. Improving in understanding and control of emotional self
        2. Improving in understanding and control of physical self
        3. Showing intelligent use of accepted health practices, and wise action on health problems
        4. Making intelligent use of accepted safety practices
    D. Developing behaviors indicative of growth toward economic literacy and independence
        1. Preparing to make intelligent choice of lifework
        2. Becoming a more efficient worker through actual work experiences
        3. Becoming a more intelligent and economically literate consumer
        4. Manifesting intelligent understanding of our national economic life and institutions
II. Growing in ability to maintain desirable small (face-to-face) group relationships
    A. Developing behaviors indicative of intelligent growth and development
        1. Manifesting acceptable family membership
        2. Sustaining friendly contacts with one's friends and with others in small unorganized groups
        3. Developing behaviors indicative of the kinds of competence needed as a member of small organized groups
    B. Developing behaviors in small group situations indicative of cultural orientation and integration
        1. Improving understanding and attitudes which facilitate desirable relationships within the family
        2. Adopting cultural and social amenities required in contacts with friends and others in small unorganized groups, and desirable interpersonal attitudes and skills in processes needed in such groups
        3. Utilizing various kinds of competence needed by members of small organized community groups
    C. Developing behaviors involved in maintaining physical and mental health and safety in small (face-to-face) group situations
        1. Maintaining health in the home
        2. Maintaining health as a participant in small peer groups
        3. Contributing to health and safety in small group situations in school and community
    D. Developing behaviors indicative of growth toward economic competence and independence in small group situations
        1. Improving economic competence and independence in family and small group situations
        2. Becoming a good member of work groups
        3. Manifesting interest and participation in the economic affairs of the community

III. Growing in ability to maintain the relationships imposed by membership in large organizations
  A. Developing behaviors indicative of intellectual growth and development
    1. Becoming intellectually able to follow developments in the world and national levels and to formulate opinions about proposed solutions to some of the principal problems and issues
    2. Identifying himself with large groups and organizations interested in cultural, social, economic, and political affairs, and becoming an effective member of them
    3. Evidencing intelligent appreciation and support of democratic goals and principles and of American cultural, social, and political traditions
  B. Developing behaviors indicative of growth toward cultural orientation and integration
    1. Viewing current events and conditions in this country and in the world in the light of their historic and cultural pasts
    2. Developing cultural background through reading and participating in various cultural organizations and activities
    3. Seeing vocational activities in their cultural settings
  C. Developing behaviors indicative of understanding problems of mental and physical health
    1. Recognizing health as a world problem, and supporting world-wide scientific and humanitarian efforts and organizations
    2. Appreciating and supporting work and services of federal, state, and local health and safety departments, and of volunteer organizations
  D. Developing behaviors indicative of growth toward economic competence and independence
    1. Recognizing the world-wide application of economic principles and the economic interdependence of the peoples of the world
    2. Supporting measures of federal, state, and local government, and voluntary organizations designed to conserve human and natural resources
    3. Understanding the need for federal and state governments' stimulative and regulatory activities in economic matters and affairs as means of making our free enterprise system work
    4. Sensing the principal problems involved in the operation of our economic system and revealing an interest in maintaining and expanding its values
    5. Recognizing the problems related to organized business and organized labor; being sensitive to both the uses and abuses of these rights[44]

Along with our recommendation that curriculum workers give consideration to the lists of goals cited here, we wish to emphasize the necessity in the world of the 1960's of seeking two important objectives in the schools: (1) the development of the ability of each pupil to discover for himself new knowledge, new understandings, new generalizations—in short, to learn how to learn—as well as of a desire to continue to learn; and (2) the cultivation of an attitude of open-mindedness in dealing with the multitudinous situations he will face throughout life. It never has been true but it is even more apparent today that any person's education, and, in fact, his formal schooling, cannot be accomplished in the thirteen or even twenty years devoted to full-time, systematic school attendance in childhood, adolescence, and early adulthood. The citizen of the world of today and tomorrow must continue to learn throughout his lifetime. The school, during the formative years of his attendance, should give him not only the ability and the competency to continue his learning, but the desire to do so. And open-mindedness is a mode of behavior much needed by the citizen today. The world is experiencing a phenomenal rate of change in many aspects of life, and the educated person must be willing to face these changes and to deal with them effectively.

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[44] *Ibid.*, pp. 92–213, *passim.*

THE FORMULATION AND USE OF AIMS BY SCHOOLS

Now that we have discussed the nature of the aims of the school, identified the bases used in defining aims, and presented some widely accepted statements of behavioral goals, attention should be given to the formulation of statements of aims by schools and other appropriate agencies and their use as guides for curriculum planning.

Who Should Define the Aims of the School?

Chapters 12 and 13 consider in detail the procedures that may be used by school systems and by teachers to plan the curriculum. Here reference will be made only to the preparation of statements of aims.

The Social Group. In the light of our discussion of society as a determinant of the curriculum, it is evident that the social group, as a totality, and individual members of it who wish to influence social action, will take a very active part in the definition of the aims of the school. And it is proper that they do so, for the school is a basic instrumentality for social realization.

The social group will be significantly concerned with the ultimate aims of the school, which provide a parameter for the delineation of the behavioral goals to be sought in individual experience. Individual citizens are free to—and should—speak out on educational issues, problems, and programs which postulate, of course, a philosophy of schooling. Conant, Gardner, Rickover, Maritain, Barzun, the President of the United States—in fact, any citizen may declare himself on the goals of education and the purposes of the school. Whether anyone in a position of responsibility accepts his point of view is, of course, another matter. Organizations such as the American Association of University Women, the United States Chamber of Commerce, the American Federation of Labor–Congress of Industrial Relations, The Council for Basic Education, The American Legion, The National Congress of Parents and Teachers, The President's Commission for National Goals, The Fund for the Advancement of Education, and many more not only do, but should, recommend goals for American schools.

The involvement of citizens and organized agencies and groups could well lead to confusion, distortion of the public's real views and beliefs, and frustration among curriculum planners as they endeavor to state specific goals. Some educators believe, however, that more systematic definition of the overarching goals of education is so essential in American life today that a national commission of some sort should be established for this purpose. Goodlad, for example, states that "we need a national body of leading citizens whose prime purpose is to give continued attention to the formulation of educational aims, as well as to other educational problems of prime importance."[45] And Hanna pleads for the establishment of a national commission for curriculum research and development that, among other things, would "research, formulate, and reformulate the basic purposes of education for our national community in a world setting."[46]

Certainly, few if any educators want a national body, regardless of how established or how discerning its members may be, to *determine* the goals of schools throughout the United States. But curriculum planners in tens of thousands of local school districts would undoubtedly welcome a thoughtful statement of objectives for their guidance that was the product of a body of our most insightful citizens.

The Teaching Profession. Organized groups of teachers and other educators play a prominent part in the definition of school aims, and this is highly proper. It is they who are qualified by education and experience to bring together all the considerations that enter into such a task, and who have the skill and competency to define aims. At the national level, such agencies or groups as the National Education Association, and its many allied departments and commissions, the United States Office of Education, The White House Conferences on Children and Youth, The American Federation of Teachers, The National Society for the Study of Education, and scores of specialized professional organizations issue pronouncements, proposals, plans, studies, and the like that constitute statements of aims or that contribute to the formulation of such lists.

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[45] John I. Goodlad, *School Curriculum Reform in the United States* (New York: The Fund for the Advancement of Education, 1964), p. 81.

[46] Paul R. Hanna, "Proposed—A National Commission for Curriculum Research and Development," *Phi Delta Kappan,* 42:335 (May, 1961).

Study committees of scholars in a field of knowledge can contribute much to a definition of school aims.

State Departments of Education. These official agencies of government have direct responsibility for curriculum planning and for educational policy making. Most departments prepare curriculum guides for the schools of the state. These publications vary from brief statements on some educational issue or problem to elaborate and comprehensive bulletins that define aims and recommend programs for the schools of the state.[47] Local school systems are expected to use such guides in the planning and development of school experience. And teachers usually find them helpful.

Nevertheless, the limited and inadequate nature of these efforts caused Goodlad to chide state and local educational agencies: "The long-term solution to this dilemma may be that those state and local (and perhaps federal) agencies, that are entrusted with responsibility for the schools, begin to formulate the aims. . . . But these agencies are not now assuming this responsibility nor does it seem likely that they will do so in the near future."[48]

School Systems. All school systems define aims of education. The very nature of policy making inherent in the establishment and management of schools necessitates such action. These aims are expressed in the structure of the educational system, in its policies, its rules and regulations, its practices, and in the educational experiences it provides pupils. An examination of the aims of a school system requires a critical and painstaking analysis of all these facets of the schooling of children. Aims are the generalized statements of the types of behavior sought through these arrangements—not only the experiences provided pupils but the institutional arrangements as well. But, as has previously been stated, the local school system should deliberately and overtly define the objectives of education being sought in the schools of that district. A report of the Project on the Instructional Program of the Public Schools states the matter bluntly:

> The public, through the local school board, is responsible for determining the broad aims of education. The professional staff is responsible for translating the broad aims into specific objectives that indicate priorities and define clearly the behaviors intended for the learners. The local board

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[47] Illustrative are these recent bulletins: Maryland State Department of Education, *Philosophy and Goals for Maryland High Schools,* 1960; Arizona State Department of Public Instruction, *Teaching Guide and Philosophy of Education,* 1960; Oregon State Department of Education, *Guide to Secondary Education in Oregon for School Years 1961–1963;* and New York State Education Department, *Objectives for Elementary Education,* 1955.

[48] Goodlad, *op. cit.,* pp. 55–56.

of education has responsibility for seeing that an acceptable statement of objectives and priorities is prepared and for endorsing such a statement.[49]

Most school systems have developed procedures for decision making in curriculum matters. Desirable practice is discussed in Chapter 12. For the specific purpose of defining aims, a committee of teachers is usually appointed. Two approaches are feasible: adoption of a statement of aims prepared by some group or agency, or preparation of such a statement by the local school staff. We suggest that a school system may well use the Kearney and the French lists of behavioral goals for the elementary and secondary levels as models, and develop a somewhat comparable statement for their own school system. Representatives of parents and citizens could participate in the undertaking, and professional educators and other scholars could be invited to work with the committees.

A good example of the efforts of a school system to define explicitly the aims of the school is the booklet entitled *Beliefs and Objectives*, prepared by the Winnetka, Illinois, Public Schools. The entire faculty participated in the preparation of the statement, which was then considered by the board of education, and, after further refinement, adopted.[50] After stating rather fully its beliefs, the faculty defined the objectives of the Winnetka Schools:

1. Give primary and unremitting devotion to intellectual growth
2. Teach the basic skills thoroughly
3. Consider the child a total human being
4. In cooperation with the home and other social institutions, help children develop attitudes, habits, values, appreciations, and understandings essential to a constructive adult life as an articulate contributing member of our society
5. Discover and respond to the special talents and needs of all children
6. Develop the habits of rational thinking and problem solving
7. Foster physical and mental health
8. Provide a setting which stimulates social and esthetic development
9. Develop a respect for hard work and an acceptance of responsibility for its completion
10. Give high prominence to moral and spiritual values

The staff of the schools of Prince George's County, Maryland, similarly prepared a statement of philosophy for the county's public schools, designating it *This We Believe.*[51] It lists eleven purposes of the educational program in the public schools of the county. Many similar statements could be cited, but these two illustrate the efforts of schools to define aims of education.

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[49] Project on the Instructional Program of the Public Schools, *School for the Sixties* (New York: McGraw-Hill Book Company, Inc., 1963), pp. 65–66.

[50] Winnetka Public Schools, *Beliefs and Objectives* (Winnetka, Ill.: The Board, 1961). Reprinted by permission of the Winnetka Elementary School District.

Teachers. Eventually, after the preliminary planning by sundry groups and agencies, it is the teacher who must guide the experiencing process of pupils so that envisioned aims are achieved as fully as it is possible for the teacher to direct the behavior of pupils to those ends. In practice, a teacher will usually select from among the aims of schooling formulated by teacher committees or other groups those which he believes are most appropriate for and most meaningful to the particular class of pupils he is teaching. If such a list is not available, or he does not accept such statements as valid for his purposes, he will, of course, himself determine the aims he will seek to attain with pupils.

It should be recognized that seldom, if at all, is any prepared list of objectives complete and detailed enough to cover all types of behavioral outcomes that may be achieved in the school. In fact, it probably should not be, for the teacher needs freedom to plan on the basis of the experience as it evolves in the classroom situation. Moreover, teachers should be alert to what Merton calls manifest and latent functions of a social enterprise. The former are those things deliberately sought and planned for; but in addition, there may be outcomes or results that were "neither intended nor recognized."[52] Certainly, something as complex as a set of learning experiences developed by a teacher and a group of pupils will produce a few and usually many "latent" results. The teacher should evaluate their impact on the education of children and youth and act accordingly.

The outcomes the teacher actually seeks, then, are those he selects, and he may be influenced in his choices to a greater or lesser degree by lists or pronouncements on aims prepared by a committee of teachers in his own school system, by representatives of the state department of education, by a committee or group of educators, by scholars in the disciplines, by a group or an individual designated by a nonprofessional organization, or by individual citizens who seek to influence educational practice. But the teacher remains to a large extent, the determiner of the behavioral changes to be sought in his class. He may, for example, in teaching reading at the intermediate-grade level decide to provide learning experiences that will enable pupils to achieve "some independence in a wide variety of word recognition techniques," or to apply "word-analysis techniques in spelling situations." In science, he may choose to direct a unit of study on "how electricity is put to work—use of a flashlight." In high school, a teacher may select as a behavioral outcome "ability to locate and use reference materials in the library on a subject."

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[51] Public Schools of Prince George's County, *This We Believe* (Upper Marlboro, Md. The Schools, 1960).

[52] Robert K. Merton, *Social Theory and Social Structure* (rev. ed.; New York: The Free Press of Glencoe, 1957), p. 51.

The Use of Aims in Curriculum Planning

Aims of education, whether a formal statement or a set of concepts carried in the minds of those who make curriculum decisions, constitute the basis for all planning and teaching.[53] If the aims have been properly formulated in relation to the two fundamental factors in the educative process—society and pupils—they should be the guides for choice making in education. In curriculum making, then, these are the purposes that a statement of educational aims may serve:

1. *Clarify the role of the school.* The statement of aims will define the responsibilities and functions accepted by the school. It will enable parents and citizens to ascertain the sets of behavioral responses the school believes to be desirable and which it assumes responsibility for teaching.

2. *Guide decision making.* In determining school policy reference to the statement of the aims of the school will constitute a basis for making decisions.

3. *Determine the selection of units of school learning experience.* Selection from among the almost unlimited range of units of experience that could be contrived by the school is, of course, necessary. Choices are determined by the outcomes to be sought by the school. There is no other way in which to select school experience, whether the aims are stated or are implicit in the behavior itself.

4. *Set the parameters for the school experiences of pupils.* As the teacher directs the behavior of pupils, the bases for such direction are the outcomes the teacher expects. The parameters of all those experiences for pupils that are guided and directed by a teacher are the aims of education.

5. *Serve as a guide for the development of pupil motives.* The teacher will use all his professional skill to elicit in all pupils participating in a unit of school experience the motives that promise to result in the behavioral responses that he strives for.

6. *Provide the basis for evaluating the curriculum of the school.* Evaluation of the school will be done by many persons. Teachers should determine the extent to which pupils in the school build into learning the desired behavioral responses. Administrators and the board of education will appraise the work of the school to determine the extent to which

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[53] For a more complete, and an excellent, discussion of the ways in which statements of aims may be used by teachers and other curriculum planners, see French, *op. cit.*, Part II.

it is attaining the ends envisioned. The citizens themselves will judge the effectiveness of the school in some degree at least by observing and analyzing the behaviors of the pupils of the school. Aims thus become the basis for all such evaluations. If these objectives have been formally defined and have been approved by teachers, board members, administrators, and citizens, evaluations will be more valid, thorough, and significant for further planning and decision making.

7. *Enable the staff and the board of education to improve the curriculum.* Improvement is impossible unless there is some determination of what constitutes goodness. Any changes in the program and structure of the school, therefore, should be in the direction of trying to achieve more effectively the ends sought through school experience.

The Validation of Aims

The assumption throughout this section has been that any definition of aims would itself constantly be subject to thorough appraisal to make certain that it spells out most completely and satisfactorily the kinds of behaviors that best contribute to the self-realization of each pupil and to the richest life for the social group. Aims themselves must constantly be evaluated on the basis of the two fundamental factors from which they are derived in the first place. This requires continual analysis of the life of the social group and of the characteristics of pupils. Validation of aims is a responsibility of all those who take part in their formulation in the first place—educators, professional groups, scholars, lay organizations, teachers, parents, boards of education, state departments of education, administrators, and citizens.

FOR FURTHER STUDY

BLOOM, BENJAMIN S., ED. *Taxonomy of Educational Objectives: The Classification of Educational Goals,* Handbook I: *Cognitive Domain;* AND DAVID R. KRATHWOHL, BENJAMIN S. BLOOM, AND BERTRAM B. MASIA, Handbook II: *Affective Domain.* New York: David McKay Company, Inc., 1956 and 1964.

A significant effort to establish a structure for the definition of educational objectives. Illustrative objectives are given for each category of the taxonomy.

BROUDY, HARRY S., B. OTHANEL SMITH, AND JOE R. BURNETT. *Democracy and Excellence in American Secondary Education.* Chicago: Rand McNally & Company, 1964.

Pleads for a general education for all youth, utilizing a common curriculum in the secondary school. Distinguishes four uses of schooling and five types of learning tasks. A challenge to present practice in the schools.

COMMISSION ON THE REORGANIZATION OF SECONDARY EDUCATION OF THE NATIONAL EDUCATION ASSOCIATION. *Cardinal Principles of Secondary Education.* Bureau of Education, Bulletin 1918, No. 35. Washington, D.C.: Government

Printing Office, 1918.

One of the outstanding documents on education of all time. In defining seven basic aspects of secondary education and stating goals for the school in each area, it guided the development of the American high school of today.

French, Will, and Associates. *Behavioral Goals of General Education in High School.* New York: Russell Sage Foundation, 1957.

An extensive list of goals, stated as behavioral changes, for the secondary school. Categories for defining goals are also listed. A significant handbook for curriculum workers.

Hook, Sidney. *Education for Modern Man.* New ed. New York: Alfred A. Knopf, Inc., 1963.

An important contribution to a consideration of goals and aims in education. His first five chapters are especially significant.

Kearney, Nolan C. *Elementary School Objectives.* New York: Russell Sage Foundation, 1953.

A companion volume to the one by French and his associates. A thoroughgoing effort to define objectives for the elementary school. Essential material for curriculum workers.

Kimball, Solon T., and James E. McClellan, Jr. *Education and the New America.* New York: Random House, Inc., 1962.

A plea for the commitment of self. Traces historically the development of commitment as a characteristic of American life, and then describes a program that would educate for commitment.

Lindvall, C. M., ed. *Defining Educational Objectives.* Pittsburgh: University of Pittsburgh Press, 1964.

An excellent series of papers on both the importance of defining objectives as a basis for planning and practice, and appropriate ways of stating objectives.

Mager, Robert F. *Preparing Objectives for Programmed Instruction.* San Francisco: Fearon Publishers, Inc., 1962.

An excellent statement on the nature of educational objectives. Lists three criteria for testing their clarity and completeness.

Phenix, Philip H. *Education and the Common Good.* New York: Harper & Row, Publishers, Inc., 1961.

An eloquent plea for an education that provides the individual the goals and principles by which to direct his life and shape his conduct. The unifying concept of such an educational program is the common good. All education should be directed to the furtherance of this common good.

Project on the Instructional Program of the Public Schools. *Planning and Organizing for Teaching.* John I. Goodlad, writer; and *Deciding What to Teach.* Dorothy M. Fraser, writer. Washington, D.C.: National Education Association, both 1963.

These major reports of the project stress the importance of defining objectives as a basis for curriculum planning, teaching, and administering the schools. A number of recommendations on the formulation and nature of objectives are made. Excellent study material for school planning groups.

CHAPTER 5

The Use of Knowledge in Curriculum Planning

Obviously, the school curriculum has content, which is to say that pupils read printed materials; view pictures, models, demonstrations, or displays; discuss topics; engage in discourse on subjects; solve problems; make things; write about something; converse with each other and the teacher about things or about ideas; and engage in other types of activities that result in learning of some kind—knowledge, skills, attitudes, behavioral patterns, or ideals, as outlined in the taxonomy of desired outcomes presented in the preceding chapter. The curriculum has always had content, the views of some critics of the school in recent years notwithstanding.

CONTENT, KNOWLEDGE, AND SUBJECT MATTER

The Content of the Curriculum

Content will be used by pupils in the development of school experiences. The existing body of knowledge possessed by human beings and its availability for school use are, therefore, basic determinants of the curriculum. Pupils cannot discourse or write themes or expositions on a topic of which they are ignorant; nor can they solve problems if they do not know the facts or principles essential for their solution. They may—and, hopefully, will—be able to discover knowledge for themselves, but this is possible only if they have some basic content (data, observations, facts, knowledge, understandings) from which to start. This chapter will be concerned with the role of knowledge *per se* (the products of knowing) in curriculum planning and the selection of pertinent knowledge, from the existing body, and its organization for study and use by pupils as they engage in learning experiences.

Let us clarify further the nature of content and knowledge as these terms relate to schooling. The content of the curriculum is selected from those facts, observations, data, perceptions, discernments, sensibilities, designs, and solutions drawn from what the minds of men have comprehended from experience and those constructs of the mind that reorganize and rearrange these products of experience into lore, ideas, concepts, generalizations, principles, judgments, plans, and solutions. This means that content is synonymous with knowledge; "subject matter" is also an appropriate term to use.[1] These products of experience and these constructs of the mind are all aspects of cognition. Ryle distinguishes between "knowing how" and "knowing what," and considers that both aspects of knowing are equally significant attributes of the mind.[2]

But in educational circles the content of the curriculum is often assumed to include not only the body of knowledge used during the learning experience but the methods of organizing and using knowledge in the process of experiencing. This is to say that the nature and character of the experience itself may be considered by some educators to be included in the generic term "content." Such looseness in using terms results in unnecessary confusion, and we believe that the content of the curriculum should be considered to be the knowledge used in the process of experiencing. Taba correctly points out that "the curriculum consists of two different things: the content and the learning experiences, or the mental operations that students employ in learning content. Although in the actual learning act the two are in constant interaction—one cannot deal with content without having a learning experience—for the purposes of establishing rational criteria the two need to be distinguished."[3] "Knowledge" is a purer, more generic term, and is preferred whenever the reference is to the act of knowing without regard for the situation in which it is used; "content" connotes a dependent situation—it is knowledge selected for specific uses or purposes.

The curriculum has content, whether we think of the activities of kindergarten children in making a model of terrain in a sandbox or a class in physics studying the structure of the atom. In the instance of the sandbox lesson, the children may be learning and using facts about the sand itself—its texture, its hardness, its fluidity, and the like; they may be making judgments about spatial relationships as they mold hills, valleys, and plateaus; they may be generalizing concepts about the nature of terrain. Pupils in the first grade may be learning the fact that two objects added to two other objects makes four objects, but they may be acquiring this fact by using Cuisenaire rods, by manipulating beads on a frame, or by repeating with the teacher a verbal statement as he writes the symbols on a chalkboard.

The members of a seventh-grade core or block-period class may be developing a unit of study on "Relationships with Our Parents." Of course, they, too, will use "content," "knowledge," "subject matter"—whichever term one prefers to use. They may, for example, read about the relationship of family life to the cultural development of the children, thus acquiring facts and some generalizations and concepts. They may listen to a talk by the school psychologist and thus acquire more facts and concepts. They may read short stories or novels that describe family life, such as Pearl Buck's *The Good Earth.* They may write essays on the subject of "What My Parents Do for Me," thus further refining and extending their concepts and understandings.

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[1] Elaboration of these points is made in two helpful essays: Kenneth B. Henderson, "Uses of 'Subject Matter'"; and Jane Roland, "On the Reeducation of 'Knowing That' to 'Knowing How,'" in B. Othanel Smith and Robert H. Ennis (eds.), *Language and Concepts in Education* (Chicago: Rand McNally & Company, 1961), pp. 43–58 and 59–71.

[2] Gilbert Ryle, *The Concept of Mind* (New York: Barnes & Noble, Inc., 1949).

[3] Hilda Taba, *Curriculum Development: Theory and Practice* (New York: Harcourt, Brace & World, Inc., 1962), p. 265.

Students in an eleventh-grade physics class may study the subject of electricity. They may read from the textbook and reference works, solve problems, perform experiments, witness demonstrations, make a magneto, wire lights in parallel or series circuits, visit a local generating station, or carry on similar learning activities. The subject matter, content, or knowledge is the sum total of facts, impressions, generalizations, concepts, principles, information, or data used by the members of the class, regardless of which of these methods of acquiring knowledge was the source. We again support Ryle in his contention that distinctions of merit should not be made between knowing what and knowing how. School experience is devoted to both aspects of knowledge.

The Place of Knowledge in the Curriculum

There would be no curriculum if there were no content, no knowledge to use as the substance of experience. In fact, by definition, man could not exist above an instinctual level unless he possessed knowledge. But this is saying the obvious. It is evident, then, that the kinds and amount of knowledge and its availability for school use are major determinants of the curriculum. The content of experience shapes its nature and character; and this holds true for school enterprises as well. From that which is extant the educator must select the content to be used in the curriculum, and in actuality from that portion of it which is or can readily be made available for pupils' use. The education of children cannot long be delayed in anticipation of new knowledge which may be discovered or be put in suitable form at some future time. Students in 1940 did not study about nuclear fission since this knowledge was not available, nor about the treaty Germany had signed with Russia in 1939 for these facts had not been made public.

Acknowledging that it constitutes a basic determinant of the curriculum, being one of the data sources (the learner, the society, the knowledge) from which a curriculum is designed, let us nonetheless consider the place of knowledge or content in school experience.

We agree with Gardner Murphy that man has a thirst for knowledge, for understanding. He insists that the child "craves to discover, to think, and to find that things make sense . . . the organism is a craving kind of thing and it craves commerce with the reality which engulfs it."[4] He further develops the concept of basic motivation by stating that "the mainsprings of action lie largely in a deep-seated, persistent need for cognitive orientation to life. . . . The cognitive need is as commanding and constraining, and at the same time as fulfilling, as any realization of the more primitive organic needs."[5] Suchman, analyzing his research on inquiry, concludes that "the activity of gathering and processing information is exciting and pleasurable. The ability to assimilate discrepant events is intrinsically rewarding, and the construction of new conceptual models that enables one to find new meaning in old events creates in the learner a sense of power."[6] As was stated in Chapter 4, one of the primary functions of the school is to assist pupils in attaining maximum self-realization and a prerequisite for achieving this end, but not the sole basis, is the acquisition of knowledge.

Second, knowledge is essential for rational action. Action cannot be rational unless the individual possesses the knowledge necessary to make it so. Without adequate knowledge, behavior at best is irrational. But even with knowledge an individual may still act on the basis of prejudice, emotionalism, instinct, traditionalism, or trial-and-error actions. Knowledge does not ensure rational action, but rational action is impossible without the knowledge necessary for reaching logical decisions.

Third, and a corollary, the welfare and progress of a nation depend on rational actions by its citizens. This is especially true in a democratic country. The diffusion of knowledge is essential when the citizenry participates in policy making. Jefferson pointed this out in the early days of the founding of this nation: "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be." And in the light of the complexity of the world today and the vast increase in the range and nature of the decisions which all citizens must make, the possession of knowledge in increasingly larger amounts is even more essential. As we argued in the previous chapter, a primary function of the school is to prepare the young for induction into adulthood; hence the acquisition of the knowledge needed for effective citizenship now and in the future is an accepted outcome of the school curriculum. It constitutes a basis of values and attitudes—primary motivational factors in the behavior of the citizen.

Knowledge begets knowledge. One must know in order to discover new facts, new data, and new solutions and to develop new meanings, concepts, generalizations, and principles. And why should man seek new knowledge? Not only because such searching fulfills his destiny as man, but it enables him better to control his environment, to improve his own quality of living, and to enable him to live harmoniously with his fellow men. The more one knows the better he can order his own existence consonant with man's conception of the good life.

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[4] Gardner Murphy, *Freeing Intelligence through Teaching* (New York: Harper & Row, Publishers, Inc., 1961), pp. 31–32.

[5] *Ibid.*, pp. 34 and 41.

[6] J. Richard Suchman, "The Child and the Inquiry Process," in A. Harry Passow and Robert R. Leeper (eds.), *Intellectual Development: Another Look* (Washington, D.C.: Association for Supervision and Curriculum Development, 1964), p. 63.

And, finally, knowledge gives meaning to life itself. Growth leads to further growth, and, as Dewey advocated so strongly, "the criterion of the value of school education is the extent in which it creates a desire for continued growth and supplies means for making the desire effective in fact."[7]

THE ORGANIZATION OF KNOWLEDGE FOR CURRICULUM USE

The body of knowledge extant in the world today is huge and, as was pointed out in Chapter 3, is growing in volume at an overwhelming rate. Inevitably, man must organize this vast reservoir of knowledge in some systematic manner or much of it would not be available for use; and the necessity for systematization increases as the fund of knowledge grows.

Two different aspects of this subject should be differentiated at this point: we will consider the organization of knowledge *per se* on the basis of its own internal rules of unity, but in curriculum planning we must also consider the selection and organization of knowledge as content for the learning experiences developed by the school.

The Discipline as an Organization of Knowledge

A *discipline* is an organized body of knowledge about a unique domain of things and events (the facts, data, observations, sensations, perceptions, and sensibilities that constitute the basic elements of knowledge or from which knowledge is derived), for which basic rules or definitions are formulated for determining what falls within and without the domain; and a recognized structure exists for organizing the body of knowledge unique to this area of study, for incorporating new knowledge into the discipline, and for undertaking the discovery of knowledge essential to the extension, refinement, and validation of the discipline. Moreover, a discipline has a history and a tradition that give it status as a field of scholarly investigation and research and as a body of knowledge that continues to contribute to man's increasing control over his universe.

Most educators readily recognize that chemistry, physics, history, geography, psychology, theology, and similar fields of study are disciplines. But what, for example, about art, music, pedagogy, linguistics, home economics, or agriculture? Does it really matter insofar as the formulation of a school curriculum is concerned? We shall see.

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[7] John Dewey, *Democracy and Education* (New York: The Macmillan Company, 1916), p. 62.

By requiring the organization of knowledge a discipline simplifies it, making it more readily available for use not only by the professionals in that field of study but by lay persons and school pupils as well. The scholar generalizes and conceptualizes, thus reducing the need for a vast array of disparate bits of information that would be impossible to carry in memory throughout a lifetime. And such generalization is a necessary step in the organization of a discipline. Nonessentials are disregarded. The data of observation and sensation are assimilated into concepts and principles and then may be forgotten.

The structure of the discipline shows the interrelationships of the field of knowledge; it unifies the field, organizing it logically so that knowledge may be used efficiently. Parts take on significance because of their relationship to the entire domain.

A discipline facilitates the development of new understandings, the discovery of new knowledge to be incorporated into the system. It points the way to new discoveries by revealing the gaps in existing knowledge in a logical structure and the directions in which an extension of knowledge is possible.

Because a discipline is an organized body of knowledge and has a structure that enables the student to incorporate new knowledge into this relationship as well as to discover new knowledge, it is practical—perhaps more practical than undisciplined knowledge. Mastery of a discipline provides a person with a capacity to do things, to see new relationships, to formulate new principles for the guidance of further action, to propose new courses of behavior, and to detect the erroneous, the inacceptable, or the false.

Finally, a discipline provides a teachable body of knowledge, organized so as to be understood and to be applied to problems the rationally acting citizen faces. The discipline itself makes evident to the teacher the important things to be learned in that particular area of study; if the field is worthy of study in the school (curriculum workers must still ask the basic question, What knowledge is of most worth?), the disciplinary organization of the content of the field aids teachers in selecting the subject matter that may well be studied.

The Structural Organization of a Discipline

Although structure is one of the basic distinguishing characteristics of a discipline, curriculum develoment in recent years has given much greater attention to the underlying and fundamental aspects of subject matter organization in these fields of knowledge. Let us examine the importance of structure in the organization of knowledge and, hence, in curriculum planning.

The structure of a discipline is the set of fundamental generalizations, principles, rules, propositions, or basic abstractions that binds a field of knowledge into a unity, organizes this body of knowledge in a cohesive interrelated wholeness, fixes the limits of investigation and inclusion of knowledge for the discipline itself, and provides the basis for discovering what else exists within the field.[8] Structure defines and limits a field of study, organizes it for comprehension and manipulation, and generates new propositions and knowledge.

Obviously, the concept of structure itself is not new, for a discipline has always had a structure, from the delineation of the classical *trivium* (grammar, logic, and rhetoric) and the *quadrivium* (arithmetic, geometry, astronomy, and music) to the modern forms of biochemistry and linguistics. What is new in educational circles is insistence that structure be identified and given primacy in the teaching of the disciplinary subjects in school. The principles, laws, rules, and propositions of the discipline have long been taught in the traditional school subjects of chemistry, physics, mathematics and, to some extent, in rhetoric when taught as a distinct subject, but the scholar feels that the proper emphasis has not been given to the importance of structure *per se* nor has structure itself been taught as the essence of the discipline. In other fields of disciplinary study, such as literature, history, geography, sociology, political science, linguistics and languages, music, and, to some extent, biology, structure has usually not even been recognized, much less received its proper attention.

Increasing attention to the structure of knowledge by scholars and curriculum workers in recent years has been necessitated by the vast expansion of knowledge that has occurred in all areas of study and investigation.[9] This "explosion" of knowledge, mentioned briefly in Chapter 3, overwhelms even the specialist in his own field of study, and much more so the nonspecialist, who may need to understand the essential elements of such a body of knowledge if he is to act rationally. Structure enables all who must use knowledge from a field to grasp the essential principles, concepts, and fundamental relationships needed for understanding. Efforts are being made to identify structures and to organize more definitely some of the areas of study that have not previously been regarded as disciplines so that mastery of a domain by both the specialist and the nonspecialist may be facilitated.

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[8] For extended discourses on the structure of knowledge and its place in curriculum planning, see G. W. Ford and Lawrence Pugno (eds.), *The Structure of Knowledge and the Curriculum* (Chicago: Rand McNally & Company, 1964); Stanley Elam (ed.), *Education and the Structure of Knowledge* (Chicago: Rand McNally & Company, 1964); and Marshall McLuhan, "We Need a New Picture of Knowledge," in *New Insights and the Curriculum*, 1963 Yearbook, Association for Supervision and Curriculum Development (Washington, D.C.: The Association, 1963), pp. 57–70.

[9] Some interesting evidence on certain aspects of the tempo of the expansion is presented by Gerard Piel, "The Acceleration of History," in G. Kerry Smith (ed.), *Current Issues in Higher Education: 1964* (Washington, D.C.: Association for Higher Education, 1964), pp. 22–32.

The emphasis in recent years on the teaching of structure resulted from the work of commissions and committees of scholars in preparing curriculum materials for school use. The work of these groups is discussed in Chapter 9. In selecting the content of school subjects in the sciences and mathematics, and later in English and social studies, the scholars of the disciplines and experienced teachers decided that new approaches should be used that would enable students to understand the subject, to know the reasons why things happen in certain ways or follow from set conditions—in short to develop at least some grasp of the structure of the discipline.[10]

In 1959, after a number of these new curriculum projects had been underway for several years, a conference of scientists, educators, and psychologists was held at Woods Hole, Massachusetts, to discuss the improvement of the science curriculum. Jerome Bruner, a psychologist with specialization in cognitive processes, served as chairman, and later prepared a report of the conference. It was this report[11] that brought to educators generally and the public an understanding of the importance of structure in the organization of school subjects. The interest in this approach to the selection and organization of subject matter for the school curriculum has spread throughout the scholarly circles of American life, and an increasingly larger number of reports, statements, and publications on the subject have appeared.[12]

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[10] For specific statements on this point see the various articles on the new programs in Robert W. Heath (ed.), *New Curricula* (New York: Harper & Row, Publishers, Inc., 1964).

[11] Jerome S. Bruner, *The Process of Education* (Cambridge, Mass.: Harvard University Press, 1961).

[12] Arno A. Bellack, "The Structure of Knowledge and the Structure of the Curriculum," in Dwayne Huebner (ed.), *A Reassessment of the Curriculum* (New York: Bureau of Publications, Teachers College, Columbia University, 1964), pp. 25–40.

Arthur W. Foshay, "Discipline-Centered Curriculum," in A. Harry Passow (ed.), *Curriculum Crossroads* (New York: Bureau of Publications, Teachers College, Columbia University, 1962), pp. 66–71.

William A. Jenkins (ed.), *The Nature of Knowledge* (The Edward A. and Roas Uhrig Memorial Lectures; Milwaukee: University of Wisconsin–Milwaukee, 1961).

Philip H. Phenix, "The Disciplines as Curriculum Content," in *Curriculum Crossroads*, pp. 57–65.

———, *Realms of Meaning* (New York: McGraw-Hill Book Company, Inc., 1964).

Project on the Instructional Program of the Public Schools, *The Scholars Look at the Schools* (A Report of the Disciplines Seminar; Washington, D.C.: National Education Association, 1962).

The Value of Structure in the Organization of School Content

Why this great interest in the structure of knowledge as a mode for organizing content for the school subjects? Our definition and description of structure indicates the basis for this attention, but let us state the reasons why structure is an important base for organizing content.

1. *Structure facilitates the use of knowledge.* By unifying facts, data, observations, and the other results of experience into an integrated body of generalizations, principles, rules, and propositions, knowledge may be more readily applied to the solution of problems, the formulation of decisions, and the determination of a plan of action. It makes knowledge manipulatable.

2. *It provides for better mastery of a domain of experience.* A knowledge of the structure of a field enables one to see the wholeness of a set of phenomena and the relatedness of events and the data of experience that are aspects of a domain. The sampling of facts without a basic plan of organization to guide study is a most inadequate way of becoming competent in a domain.

3. *A knowledge of the structure of a discipline enables the individual to revise his understanding of a field as new facts and data become known or as old concepts and principles are proved to be inadequate or erroneous.* Radical reoganizations of a field of study are likely to occur during the lifetime of the person, and probably with increasing tempo; if one has mastered adequately the basic structure of the field, he can remain abreast of new developments and new findings, and contribute to the better definition of the field.

4. *It enhances memory.* Organization of a field of knowledge provides for better retention of the essential and significant aspects of this knowledge. Unimportant and trivial matters are discarded; the structure itself is remembered more readily and is retained better because the principles are likely to be used more frequently than would isolated facts and data.

5. *It facilitates use of the knowledge in new stimulus situations.* The matter of transfer of learning is a tricky one, and will be discussed in the next chapter, but whether one believes that we "transfer" learning or simply use our stock of learnings in new situations because they seem to the person to "fit" and to serve his purposes, all students of psychology agree that knowledge generalized into concepts and principles will be more readily used in new situations than will isolated bits of learning.

6. *Structure is the basis for making discoveries of new knowledge appropriate to the domain.* The student who goes on to become a specialist in the field will be able to contribute significantly to the advancement of learning and scholarship. Teaching by use of the methods of inquiry and discovery depends on the use of structural propositions for effectiveness.

7. *Structure enables the curriculum worker to make the best selection of content for study in the disciplinary subjects.* It pinpoints the relevant and discards the irrelevant. Pupils are not overwhelmed with unimportant information on a subject or lost in a morass of facts. Moreover, curriculum content can more readily be kept up-to-date so that the lag between the knowledge possessed by the scholar and taught in the school is narrowed or eliminated.

8. *Organized knowledge constitutes a powerful potential to do, a capacity to act.* It is a reservoir of know-how and know-that, available for use in facing problems as they arise, in dealing with unforeseen situations or familiar situations more effectively.

Organizing Content for Pupil Use

But not all subject matter useful in the advancement of learning is organized as a recognizable discipline. This is apparent from the definition and description of a discipline. But some of this knowledge is also valuable for school use. Important aspects of school learning are not achieved by the study simply of the disciplines.

Subject matter must be organized in some fashion for use in the school curriculum, either in a disciplinary manner for knowledge that lends itself to such an organization or on some other basis appropriate to the purposes of the school. Hence those who plan the curriculum must select whatever elements will best serve to organize the classwork of the pupils. In selecting these organizational elements of learning activities we are determining the "how" of curriculum organization.

The modes, as we prefer to designate these basic elements, that have been used in recent educational history and are used today for organizing classwork consist of (a) the school subjects, (b) life activities of people as members of a social group or as individuals, (c) needs, problems, and interests of the class members themselves, and (d) activities performed in an occupation. In educational practice, these comprise the four basic methods of organizing the class program of the school. Let us examine each mode of organization.

SUBJECTS AS A BASIS FOR ORGANIZING CLASSWORK

The subject matter basis for curriculum design is familiar to all teachers and pupils. It is, of course, the method most extensively used in schools today; in fact, almost all elementary and secondary schools use it as the principal or exclusive method of formal curriculum organization. In this plan, the experience of studying organized bodies of knowledge is the principal method used to attain the aims of education. Knowledge, consisting of facts, data, descriptions, explanations, generalizations, principles, and concepts, is organized and reorganized into bodies of subject matter, some of which we may properly designate as a discipline but others are not, simply being organized units of subject matter without disciplinary status in academic circles. In this plan of curriculum organization, the classroom experiences of pupils are centered in a study of these organized bodies of knowledge, or, more specifically, those considered by curriculum planners to be of most worth to the young and immature.

Organization of Content in the Subject Curriculum

In a subject mode of curriculum organization further decisions must be made as to the "organizing centers" or "organizing elements," as Goodlad designates them,[13] that will be used as a basis for selecting and organizing the content to be studied in each school subject. Bloom defined these organizing elements or "integrative threads" as "any idea, problem, method, or device by which two or more separate learning experiences are related."[14]

These organizing threads may be *events,* such as organizing the subject of history in a chronological sequence, or they may be *themes,* such as the "westward movement in the United States," or "the evolution of the labor movement," or *concepts,* such as "the struggle for individual rights and liberties," or "the interdependence of the world," or "how living things utilize their environment." *Nations of the world or regions of a nation* may be used as an organizing element, particularly for geography; *types* of ecological conditions are also used, such as a study of peoples living in tropical regions, arid regions, and the like. The school subject may be organized around the *life activities* of people, such as "pioneering in new communities across the mountains," or "protecting the bodily organs from injury and disease." In the study of literature, *genres* or *types,* such as essays, poetry, drama or fiction, may be the organizing element. Identifiable *periods* of literary development may be used, such as the romantic period, the Victorian period, or the modern period. In mathematics, the organizing elements for the subject may be *strands* or *topics,* such as sets, equations, areas of plane figures, the binary system, functions, positive and negative numbers, or similar topics. In language arts, aspects of *usage* may be used to organize the subject, such as punctuation, paragraphing, dependent clauses, agreement, tense, gender, and the like.

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[13] Project on the Instructional Program of the Public Schools, *Planning and Organizing for Teaching,* John I. Goodlad, writer (Washington, D.C.: National Education Association, 1963), pp. 28–29; and John I. Goodlad, *School Curriculum Reform in the United States* (New York: Fund for the Advancement of Education, 1964), pp. 53–59.

[14] Benjamin S. Bloom, "Ideas, Problems, and Methods of Inquiry," in *The Integration of Educational Experiences,* 57th Yearbook, Part III, National Society for the Study of Education (Chicago: University of Chicago Press, 1958), p. 91.

In recent years great interest on the part of curriculum planners has been shown in *structure* as a basis for organizing school subjects in the disciplines, particularly at the secondary school level, although this method of organizing content is also used in mathematics and science at the elementary school level.

Thus it becomes clear that after the educator may have determined that school subjects are to be the basis for organizing the class program of the school, that is, it is to be a subject curriculum, major decisions must still be made as to the elements or threads to be used as a basis for selecting the content itself for each grade or level of schooling. In determining these organizational strands for the subject matter to be studied, the advice and assistance of the scholars in the discipline, including teachers who themselves are scholars in an area of subject matter, as well as the members of university staffs and institutes of advanced study, are desirable. Our knowledge of pupils, especially their interests, their motivations, the character and nature of their social and cultural development, and their capacities and capabilities, are especially germane to the determination of appropriate ways of organizing content. The availability of texts and other instructional materials is also an important consideration. It would have been very difficult for any teachers to have used the kinds of content organization now known as modern mathematics or PSSC Physics until teaching materials were available for pupil use.

Scope in the Subject Curriculum

The scope of the subject curriculum is defined by the list of subjects offered by the school. Scope may be designated grade by grade from first grade through high school, or by school levels in ungraded schools. In most elementary schools only broad areas of subject matter content are designated, with recommended units of study included in a curriculum guide. The scope of the class program of the school system would be the sum total of the subjects offered during the twelve years of school.

Sequence in the Subject Curriculum

The vertical organization of the subject curriculum, that is, the determination of sequence, is an exceedingly difficult aspect of curriculum planning. Sequence itself may be shown by the subjects listed for each grade level, or for each grouping of pupils in a school, such as an ungraded group. In the secondary school certain subjects may be studied in the tenth grade, the eleventh grade, or the twelfth grade. Some may be studied in any of these three grades. Some subjects must be studied before the pupil may enroll in a more advanced level of the same subject.

In the elementary school in which instruction is organized in broad fields of subject matter, such as language arts, social studies, science, and mathematics, rather than around specific subjects, sequence is shown by the units of work that are recommended for development in each grade or each level. Sequence can be determined from the curriculum guide.

Virtues of the Subject Matter Type of Curriculum Organization

The almost exclusive use of the school subjects as a basis for selecting and planning learning experiences in school has many advantages. In fact, efforts to displace it with other approaches, discussed in the following sections, have largely failed, and even the most experimental schools have returned sooner or later to a subject organization, partly because of the acknowledged advantages of the subject plan.

Phenix states the essence of the disciplines approach:

> . . . the curriculum should consist entirely of knowledge which comes from the disciplines, for the reason that the disciplines reveal knowledge in its teachable forms. . . . Education should be conceived as a *guided recapitulation of the processes of inquiry which gave rise to the fruitful bodies of organized knowledge comprising the established disciplines.*[15]

What are the merits of the school subjects as a basis for organizing the curriculum?

1. The knowledge and understanding of disciplines and their subunits of subject matters develop "a massive potential of capacities to do, to make, to alter, and to modify."[16]
2. Knowledge of the disciplines, to which knowledge of subject matters contribute in ever-higher spirals of study in the school, enables us to make discoveries, to search out new knowledge, to organize facts into usable generalizations and concepts—all of which is most useful to man living in a physical and a social environment.
3. Most of the acts of behavior of man attain goodness as they are based on knowledge, understanding, and conceptualizations; these are best taught through systematic study of organized bodies of subject matter.
4. New knowledge is best retained by the learner and is most usable to him later as it is reconstructed into organized bodies of knowledge.
5. Study of the bodies of subject matter, with emphasis on the organization and structure of knowledge, best develops the intellectual abilities of the individual, and hence enables him to deal more effectively with life situations.

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[15] Phenix, "The Disciplines as Curriculum Content," p. 64.

[16] Joseph J. Schwab has elaborated this argument more fully in an unpublished paper, "Education and the Structure of the Disciplines," prepared for the Project on the Instructional Program of the Public Schools, National Education Association, 1961, p. 41.

6. Schools, colleges, teachers, parents, and citizens in general are geared to the subject-centered curriculum and support wholeheartedly this plan of curriculum organization.
7. Curriculum planning, teaching, and evaluation are facilitated and more readily carried out in the subject organization.

Shortcomings of the Subject Curriculum

Although the subject organization characterizes the curriculum of most schools and higher institutions today, some criticism is directed at its exclusive use in the schools. Most of these criticisms are the negative side of arguments advanced later in favor of other types of organization.

1. The subject-centered organization of the curriculum does not provide a meaningful and significant learning experience for pupils, particularly the immature and the slow learner. Dewey points out, on one hand, that "the gulf between the mature or adult products and the experience and abilities of the young is so wide that the very situation forbids much active participation by pupils in the development of what is taught."[17]
2. When the school limits the curriculum to the school subject organization, the opportunities for pupils to achieve the desired behavioral goals that constitute the aims of the school are curtailed.
3. Learnings represented by knowledge of subject matters may not readily and adequately transfer to new behavioral situations.
4. Learning is fragmented and segmented, so that pupils do not make full use of knowledge in other behavioral situations in which it may be appropriate.
5. The subject curriculum seriously limits the range of learning experiences.

LIFE ACTIVITIES AS A BASIS FOR CONTENT ORGANIZATION

The basic life activities of people as a mode for organizing classwork is as old as man himself, for has not man always inducted the youth by one means or another into the life of the adult? In more recent times, this is the plan of content organization advocated by Herbert Spencer. In fact, Spencer's five areas of life activities[18] are the basis for much of the recent formulations of this approach.

In modern educational practice, the use of the activities of man as a basis for selecting and organizing subject matter for the school follows two approaches: content selected (a) on the basis of the most important aspects of man's activities as a social being; and (b) on the basis of the major social problems which demand a solution in present-day society. The two variations usually result in much the same selection and organization of content for study in the school, but in one the units for study are selected by a logical analysis of what man does as a social being, and in the other by an analysis of the most urgent and serious problems man must solve to maintain his society and to improve it. The curriculum planner utilizes the research of the cultural anthropologist in determining the important categories of man's life activities and of the sociologist in ascertaining the basic problems facing our society today.

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[17] John Dewey, *Experience and Education* (New York: The Macmillan Company, 1938), p. 4.

[18] See Chapter 4, page 145.

This method of selecting and organizing the units of study in the school is based on the theory that the best way in which to educate the young for life in the society of the group is to provide him with sets of approved behavioral responses that he may use in reacting to known environmental situations that he will confront, but also to guide the learner in the generalization of these responses into principles and concepts that he will utilize effectively in responding to new stimulus situations.

The most extensive efforts to use categories of life's activities as a method of organizing classwork were carried out in the 1930's by a number of state departments of education working under the general direction of Hollis L. Caswell, then at George Peabody College for Teachers. Committees of teachers appointed by the chief state school officers in these states prepared elaborate guides for the selection and planning of units of work. Several areas of living were commonly identified by these groups:

1. Protecting life and health
2. Getting a living
3. Making a home
4. Expressing religious impulses
5. Satisfying the desire for beauty
6. Securing education
7. Cooperating in social and civic action
8. Engaging in recreation
9. Improving material conditions[19]

These nine areas of living, or comparable delineations, constituted the scope of the curriculum for that portion of the school day devoted to the core area of study; sequence was determined by selecting centers of interest for each grade group.

A more recent use of this method of designing a curriculum is found in the social studies program at the elementary school level of the Philadelphia public schools. Their curriculum guide defines the scope of the curriculum as follows:

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[19] O. I. Frederick and Lucille Farquear, "Areas of Human Activity," *Journal of Educational Research*, 30:672–679 (May, 1937).

> The following *basic social processes* or human activities constitute the areas to be explored in our elementary school social studies program:
>
> 1. Conserving life and health
> 2. Conserving and utilizing natural and man-made resources
> 3. Producing, distributing, and consuming goods and rendering services
> 4. Transporting goods and people
> 5. Communicating information, ideas, and feelings
> 6. Organizing and governing group actions
> 7. Providing for and participating in recreation
> 8. Providing an education
> 9. Satisfying esthetic and spiritual needs[20]

Units of work to develop these areas of living are then recommended for each grade. Illustrative titles follow.

Grade 1	"Our School and Its Helpers" "Caring for Our Pets"
Grade 3	"How We Get Our Clothing" "How Different Foods Get to Our Table"
Grade 6	"Ties of Trade Unite the World" "The Cultural Gifts of Our World Neighbors"

The Strengths of the Areas of Living Plan for Curriculum Organization

The advocates of the areas of living plan for curriculum design believe these to be its principal advantages:

1. Units of learning experiences developed by the school are meaningful and significant to the pupils; hence efficient learning results.
2. Content is more likely to be selected on the basis of utility and significance for today's world.
3. Application of the products of learning to new situations encountered in life is enhanced. The pupil gains his knowledge from them and applies it to the study of man's activities; thus the pupil is better able to use these responses or to generalize them for use in similar problem situations in the future.
4. The areas of living design enables pupils to achieve more fully the desired outcomes of education. Teaching units developed in this plan

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[20] School District of Philadelphia, *A Guide to the Social Studies in the Elementary Schools* (Philadelphia: The Schools, 1956), pp. 10–11.

produce a richer variety of experiences, and, hence, a broader coverage of the aims of education occurs.

5. Integration of the units of experience provided by the school is facilitated and encouraged.

Shortcomings of a Design Based on Life's Activities and Problems

The fact that this mode of organization of classwork has never been attempted in its pure form by many schools and that it has been discarded eventually in a number of those that have experimented with it indicates that schools face difficulties in its use. It will be noted, of course, that the shortcomings of one plan become in part at least the advantages of another plan; hence attention should be given in this connection to the virtues listed for the subject approach.

1. Educational and social conditions are not conducive to the adoption of the areas of living plan by schools. The development of a fundamentally new plan for organizing content necessitates the re-education of teachers who have been schooled in the use of the subject plan, the preparation of new curriculum guides, textbooks, reference works, and instructional aids, the re-orientation of pupils who have previously been in the subject curriculum, and, often the most difficult of all, the development of support among parents and citizens for the new scheme.
2. A study of areas of living or of social problems may not be meaningful and significant to pupils.
3. An area of living design may fail to include essential learnings pupils will need in dealing with behavioral situations in the future.

NEEDS, PROBLEMS, INTERESTS, AND EXPERIENCES OF LEARNERS AS A MODE FOR CONTENT ORGANIZATION

Historically, the revolt against the traditional subject curriculum, which, of course, adults formulate and impose on children, was an effort to shift the basis for selecting content for classwork from organized bodies of knowledge to the interests, needs, concerns, and problems of the learners themselves. This was the approach used by Pestalozzi in his school in Switzerland, and advocated by Rousseau in the education of Émile. But it was the philosophical theories of Dewey that gave rise to this plan of content organization in this country. He said that "a coherent *theory* of experience, affording positive direction to selection and organization of appropriate educational methods and materials, is required by the attempt to give new direction to the work of the schools."[21] He re-emphasizes the point later: "It is a cardinal precept of the newer school of education that the beginning of instruction shall be made with the experience learners already have; that this experience and the capacities that have been developed during its course provide the starting point for all further learning."[22]

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[21] Dewey, *Experience and Education*, p. 21

However, in view of Dewey's continuous admonition that experience must contribute to growth and lead to something worthwhile in the development of the child (and Dewey states his concept of what constitutes worthwhileness), it is doubtful if he ever approved or accepted some versions of this mode of organization developed by his followers.

Within the general pattern of this type of design considerable variation in plans and practices occurred. At one extreme was an unstructured curriculum, known as the "experience" curriculum, in which the units of learning experience were selected and planned by the pupils themselves under the guidance of their teacher; at the other was a highly structured, predetermined curriculum plan based on the so-called "needs" of pupils. Teachers and pupil would select units of work from among those recommended in the plan according to their interests or "needs."

Selection of units of learning in the "experience" curriculum was a cooperative venture of the pupils who would do the experiencing. The teacher, of course, provided guidance and directed planning, but it was contrary to the spirit of the plan for him to impose his ideas on the class.[23] Inasmuch as the curriculum may be unstructured, the nature of the learning experience can only be determined by reading post-experience accounts of what was done.[24]

In the other version of this mode of organization the needs of learners became the basis for selecting educational experiences. These needs first had to be defined, and the psychologist, the psychiatrist, and the psychoanalyst were called upon to assist in the task. Needs of people may be regarded as a valid psychological construct, and Maslow's list, given in Chapter 6, is a good illustration of such a statement. However, when the needs design was being most vociferously advocated in the 1930's the statement of needs formulated by the Commission on Secondary School Curriculum of the Progressive Education Association was most widely used.[25] Curriculum committees in some school systems also formulated lists of "needs," as did individual educators. The task of curriculum workers was then to develop units of experience that would enable the school to gratify these needs. Needless to say, such a task was an exceedingly difficult one, and only a few schools really used a "needs" design.

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[22] *Ibid.*, p. 88.

[23] An extensive discussion of this method of designing a curriculum is to be found in L. Thomas Hopkins, *Interaction: The Democratic Process* (Boston: D. C. Heath and Company, 1941).

[24] For such accounts see Harold Rugg and Ann Shumaker, *The Child-Centered School* (New York: Harcourt, Brace & World, Inc., 1928).

[25] Progressive Education Association, Commission of Secondary School Curriculum, *Science in General Education* (New York: Appleton-Century-Crofts, Inc., 1938), pp. 64, 144, 188, 241.

A third approach in organizing content on a pupil-centered basis was to offer units of work that would enable children and youth to study their most perplexing and pressing personal problems. Again, the rationale was to carry out Dewey's dictum that learning must start with the "experience learners already have." Motivation to learn would be high, so the advocates said, for school experiences would be meaningful and significant to the pupils. They would see purpose in the activities of the class. Two principal methods were used to define the problems to be studied: (a) personal statements by the pupils orally in planning session, by writing an essay, or by checking a prepared list of postulated problems;[26] or (b) the research of psychologists and psychiatrists. In some instances curriculum committees or professional educators simply drew up a list of what they considered to be the problems of pupils, perhaps validating the list by some type of survey or by judgments.[27] Interestingly enough, such lists often were substantially the same as lists of social problems prepared under the life activities type of content organization.

Arguments in favor of the Needs, Interests, and Problems Approach to Curriculum Design

The pupil-centered approach to content organization was an effort to base the program of the school on two important concepts that swept educational thought in the 1920's and 1930's: the necessity of motivation, based on interest, meaning, and significance, for efficient learning; and the responsibility of the school to educate all children and youth for individual and group living in a democracy. The advantages claimed for this method of selecting and developing learning experiences and organizing their content were primarily these:

1. The needs, interests, problems, and past experiences of learners provide the best basis for the development of high motivation in learning activities of the school.
2. The pupil-centered design enables the young to acquire the knowledge, understandings, values, skills, and attitudes that enable them to contribute effectively to the welfare of the social group.
3. Some of the aims of education may be attained most effectively through use of this type of curriculum organization. If the aims of the school are conceived as a set of behavioral goals of broad scope, the types of learning experiences developed in the pupil-centered aproaches will,

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[26] An example is Ross L. Mooney, *Problems Checklist* (New York: The Psychological Corporation), forms for junior high school, high school, and college.

[27] See Lucille L. Lurry and Elsie J. Alberty, *Developing a High School Core Program* (New York: The Macmillan Company, 1957), Chap. 3.

it is insisted, contribute more fully to their realization than is possible under other types of curriculum design.

4. A curriculum based on needs, problems, and interests contributes to good personal development, particularly social and emotional development.
5. Integration of learning is facilitated by the pupil-centered design.

The Deficiencies of the Pupil-centered Type of Content Organization

In the very limited use of this aproach in its full scope in the schools, these difficulties or shortcomings have been noted:

1. It is difficult to determine the needs, interests, and problems of children and youth. Definitive statements of the needs of human beings have never been formulated to the satisfaction of psychologists. Lists of needs used by curriculum workers in selecting units of work had very questionable validity, and statements of the problems of pupils or of their interests were even more suspect.
2. A curriculum that uses needs, problems, or interests as organizing centers for educational experience is apt to minimize structures of knowledge, methods of discovery, and depth of understanding of subject matter.
3. The needs approach may minimize the fulfillment of the social responsibility of the school.
4. A pupil-centered curriculum militates against an organized program of schooling.
5. Educational conditions are not conducive to the use of the plan. As was stated in the discussion of the areas of living organization, schools are not geared to the use of either of these two types of design.

DESIGN IN VOCATIONAL AND PRACTICAL AREAS OF STUDY

Three types of curriculum organization discussed up to this point are used in the aspects of schooling which are designated as general education or the disciplinary part of specialized education. But they do not designate accurately the mode of organization of content in the vocational subjects and the nondisciplinary areas of specialized education.

Classwork in the vocational areas, including prevocational types of subjects, has two aspects: theory and practice. In the theoretical aspects, factual information, principles, concepts, and generalizations are taught. However, content is selected and units of study are organized on the basis of the knowledge and skills needed to perform an occupation or to carry out the duties required in a job. The mode of organization is determined by an analysis of what workers do in a particular job and what responsibilities they fulfill as a part of the job. Some additional units of study may be devoted to topics of a more general nature, providing an understanding of social and economic matters, such as labor unions, job success, social security, insurance, job benefits, and the like.

In the practical aspects of vocational study, pupils work at the job itself, performing the basic types of tasks done in the particular vocational area. Thus pupils studying automotive body repair will engage in these kinds of unit studies and job operations:

1. Introduction—course aims, program description (administrative)
2. Safety precautions (informational, general)
3. Shop organization (administrative)
4. Principles of body construction (informational, general)
5. Educational and occupational guidance (informational, guidance)
6. Testing procedures and grading (administrative)
7. Metal bumping (operational)
8. Measuring and layout of body sheet metal (operational)
9. Metal forming (operational)
10. Metal finishing (operational)
11. Shrinking excessive metal (operational)
12. Heat treating (operational)

13–31. [Various operational units of study]

32. Estimating repair jobs (informational)
33. Modifying original car design (informational, general)
34. Improving present methods of repair (informational, general)[28]

Advantages of the Job-analysis Mode of Content Organization

In appraising the curriculum organization used in vocational education, it must be recognized that pupils will also be taking work in general education courses and in specialized courses not specifically a part of the vocational training; the design of those courses was discussed in the previous sections. There are several advantages to basing a curriculum in vocational courses on job analysis and to selecting content in terms of the understandings and competencies needed to perform work:

1. This type of curriculum organization contributes efficiently to the development of job competency and the acquisition of the skills, understandings, and knowledge necessary and desirable for the performance of jobs.
2. If competency is a major motivational force in human behavior, as White contends,[29] this plan of curriculum design provides a high degree of motivation for its enrollees. Moreover, motivation on the basis of

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[28] Richard Christian, *Course of Study for Washington Trade School* (Detroit: Detroit Public Schools, 1958).

[29] See Chapter 6, page 211.

aspirations and goal expectancy is also high in this type of a curriculum.

3. A job-analysis design contributes to the development of talents and capabilities not fully provided for in other types of curriculum organization.
4. The job performance experiences in the practical phases of vocational courses utilize to the fullest the maxim that learning results from experience, and the more meaningful and significant the experience the more is learned.

Shortcomings of the Job-analysis and Job-performance Design for Vocational Education

For the vocational aspects of schooling this design has some deficiencies; and it should be understood that we are not here considering the justification for or the place of vocational education in the program of common schooling of children and youth, but only the validity of the curriculum organization itself.

1. The job-analysis and job-performance curriculum minimizes the development of a structure of knowledge and an understanding of principles and generalizations applicable to an organized body of content. Discovery, another important concept for teaching, is absent or reduced to a minimum in most programs of vocational education. Advanced courses in clothing design or courses in pattern making, courses usually beyond the scope of the secondary school program, may possibly be taught on the basis of discovery, but few are.
2. Analysis of existing jobs and of the ways in which they are now performed educates for the existing situation in employment opportunities and job performance, and hence fails to educate pupils adequately for changing conditions in the world of work. The necessity for retraining great numbers of workers, although perhaps impossible to avoid in a rapidly changing technology, nevertheless illustrates one of the crucial problems facing educators in planning a curriculum for occupational preparation.
3. Although it is not automatically a requirement of this type of design, in practice vocational preparation is too frequently limited to specific jobs, thus narrowing the breadth of study and the opportunities for employment in a group of related occupations. By the very nature of its approach the job-analysis and job-performance technique could provide for the development of knowledge and skills applicable to a whole cluster of occupations, but such is not always the case in vocational programs.

In those areas of study which are not disciplinary or vocational, and which, for lack of a better group designation, we call the practical or functional courses, such as homemaking, nonvocational courses in business and industrial arts, physical education, music, art, and driver education, curriculum organization also utilizes quite extensively job-analysis and job-performance approaches, although occupational training may not be an objective of the courses. In such a diversity of courses some deviations exist, of course, and this is particularly true of the areas of music and art, in which disciplinary study may be evident. But homemaking courses are extensively oriented to the duties and responsibilities of the homemaker, business courses and industrial arts to the acquisition of skills, and driver education classes solely to the skillful and careful operation of an automobile. Units of learning experience in physical education are selected to ensure use of the muscles, although in health education they are designed to provide knowledge and understanding. Music and art in the common schools are designed principally to develop skill in performance.

THE ORGANIZATION OF CONTENT IN THE SCHOOL SUBJECTS

The preceding discussion has stated that a curriculum plan for a school indicates in one manner or another (curriculum guide, course of study, syllabus, or recommended textbook) the subject matter or types of subject matter to be studied by pupils and the mode or modes in which this content is to be organized for school use. Four principal modes or bases are used to select and organize subject matter: (a) the school subjects, organized on the basis of elements, themes, centers, or structures that inhere in the subject itself; (b) aspects of social life in which people engage in group living; (c) needs, interests, problems, and experiences of the learners themselves; and (d) skills and knowledge used in performing a job.

Curriculum planning committees use their judgment in determining first the basic mode of organization of the content and then the element or elements appropriate to that mode for selecting and teaching the content in units of work. A subject, for example, may be organized on the basis of themes, strands, topics, problems, events, place, chronology, logical order, psychological order, sequential development, or the structure of the discipline that constitutes the subject field.

This freedom to choose the kind of mode and the organizing elements to be used has, of course, led to a great variety of curriculum plans and of content organizations among the thousands of schools of the United States. Although many curriculum workers believe that such experimentation, innovation, and tryout has, in the long run, produced a more challenging program of education in this country, it is this variability that in part gave rise to the establishment of the various national curriculum planning projects. The members of these commissions believed, and many scholars and professional educators agreed, that much of the content being used by many school systems and the ways in which it was organized for study in the disciplinary subject fields were out of harmony with the kinds of education needed in the world of tomorrow. The school curriculum was seriously out of gear, it was claimed, with what was known and what was important for specialists in these fields of study. Woodring summarizes this point of view: "Curricular reform is long overdue. In the natural sciences the vast expansion of knowledge of recent years is not yet reflected in conventional courses in physics, chemistry, and biology. Mathematics has undergone profound changes which do not appear in most of the textbooks. A great gulf has developed between the 'social studies' taught in the high schools and the 'social sciences' taught in the colleges, which needs to be closed."[30]

Thus a renewed emphasis on the disciplines is evident in curriculum planning throughout the nation, a return not to the content of the disciplinary subjects of years ago, but to content selected and organized on the basis of the structure appropriate to that discipline. And teaching is for an understanding of this structure and not merely to transmit the facts, data, and concepts that comprise the elements of the discipline.

But most schools, particularly secondary, offer a large number of areas of study that are not comprehended within the recognized disciplines. These include, for example, subjects in the fields of industrial arts, business, homemaking, crafts, foreign languages (linguistics as a separate subject may be accepted as a discipline), vocations, and health. And we will not venture here into the battle over which of the social studies are disciplinary or nondisciplinary. A third part of the subject offerings is concerned with the development of psychomotor skills, such as reading, physical education, vocal and instrumental music, applied arts, speech, journalism, and the like. Obviously, for these two nondisciplinary parts of the curriculum teachers select and organize content on a nonstructural basis.

Moreover, it must be recognized that many schools have not yet, and perhaps never will, organize even all of the disciplinary subjects on the basis of their structure. And in most schools this would be true for some sections of the classes studying the disciplinary subjects, particularly those in which pupils low in academic ability are grouped. This is in spite of the fact that some advocates of the structure approach insist that "good teaching that emphasizes the structure of a subject is probably even more valuable for the less able student than for the gifted one. . . ."[31]

A final observation on the current status of the school subjects is appropriate: The use of structure as a basis for organizing the disciplinary subjects at the elementary school level is very limited. Some school systems have introduced a structural organization, or major aspects of it, in mathematical studies, and some in science. Incidental attention may be given to structural concepts in other disciplines but it is not a principal basis of organization.

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[30] Paul Woodring, "Introduction," in *New Curricula*, p. 2.

[31] Bruner, *op. cit.*, p. 9.

In summary, these seem to us to be the ways in which the subjects of the school curriculum may be—and currently are—organized:

Basis for Organizing and Selecting Content of School Subjects

I. School subjects with a disciplinary base (fields of mathematics, science, English, some of the social studies and theoretical subjects in music and art)
   A. Basis of the structure of the discipline
   B. Basis of nonstructural organizing elements appropriate to content selected for study, such as themes, strands, focal points, and the like

II. School subjects with a nondisciplinary content (fields of business, crafts, foreign language, health, homemaking, industrial arts, and vocations)
   A. Basis of organizing elements appropriate to the content selected for study, such as themes, strands, focal points, and the like
   B. Basis of aspects of social living
   C. Basis of needs, interests, problems, and experience of the pupils
   D. Basis of job requirements

III. School subjects for the development of psychomotor skills (reading, music, art, speech, journalism, physical education, and many studies in the fields of business, industrial arts, and vocations)
   A. Basis of appropriateness for developing the desired skill

ACQUIRING KNOWLEDGE THROUGH SCHOOL EXPERIENCE

Knowledge is, of course, a product of experience and of the mind itself. Through his receptors, the individual acquires concreta, the raw data of knowledge, such as sensations, observations, information, sensory impressions, data, and sensibilities. He himself, then, beginning in infancy, as Piaget and his associates[32] describe, builds the systems of knowledge that constitute concepts, generalizations, inferences, thought processes, abstractions, principles, rules, and propositions. All these are knowledge—"knowing how" and "knowing that."

There are many ways of teaching children how to acquire knowledge—rote, drill, discussion, exposition, telling, writing, simulating are some.

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[32] Jean Piaget, *The Language and Thought of the Child* (New York: Humanities Press, 1959); and Bärbel Inhelder and Jean Piaget, *The Early Growth of Logic in the Child* (New York: Harper & Row Publishers, Inc., 1964).

Books on teaching methods fill so many shelves that it is not appropriate here to extend the consideration beyond a brief discussion of one method —learning by discovery and by inquiry—that is advocated by some of the proponents of the view that the structural organization of knowledge should be emphasized in teaching.

Learning by Discovery and Inquiry

Some of the plans, proposals, and sets of teaching materials prepared by the curriculum committees and commissions described in Chapter 9 state that learning by inquiry and discovery is a fundamental and basic aspect of the curriculum plan. For example, Beberman, one of the principal formulators of the "new" mathematics program, said that "the student will come to understand mathematics if he plays an active part in developing mathematical ideas and procedures. To us this means that after we have selected a body of subject matter to be learned we must design both exposition and exercises in such a way that the student will discover principles and rules."[33] And Bruner, who seems to have assumed a role of philosopher for the new curriculum programs, maintains that "whether one speaks to mathematicians or physicists or historians, one encounters repeatedly an expression of faith in the powerful effects that come from permitting the student to put things together for himself, to be his own discoverer."[34] Schwab, a biologist as well as a science educator, pleads for teaching science as inquiry,[35] which, in its fluid component, involves the teaching methods of discovery. Taba has stated the rationale of the method.[36] Suchman has experimented with methods of teaching as inquiry.[37]

A searching and extensive analysis of arguments advanced for teaching methods that use learning by discovery and inquiry has been made by Ausubel,[38] and teachers and other curriculum workers are urged to study his scholarly evaluation. He believes that discovery methods are useful

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[33] Max Beberman, "An Emerging Program of Secondary School Mathematics," in *New Curricula,* p. 23.

[34] Jerome S. Bruner, *On Knowing* (Cambridge, Mass.: Harvard University Press, 1962), p. 82.

[35] Joseph J. Schwab, "The Teaching of Science as Enquiry," in *The Teaching of Science* (The Inglis Lecture and the Burton Lecture, 1961; Cambridge, Mass.: Harvard University Press, 1962).

[36] Hilda Taba, "Learning by Discovery: Psychological and Educational Rationale," *Elementary School Journal,* 63:308–316 (March, 1963).

[37] J. Richard Suchman, "The Child and the Inquiry Process," in *Intellectual Development,* pp. 59–77.

[38] David P. Ausubel, "Learning by Discovery: Rationale and Mystique," *Bulletin,* No. 269, National Association of Secondary School Principals, 45:18–58 (December, 1961); and "Learning by Discovery," *Educational Leadership,* 20:113–117 (November, 1962).

"in the early, unsophisticated stages of learning any abstract subject matter, particularly prior to adolescence"; that it is "indispensable for teaching scientific method and effective problem solving skills"; and that "various cognitive and motivational factors undoubtedly enhance the learning, retention, and transferability of meaningful material learned by discovery."[39] Acclaiming these virtues of the discovery method, Ausubel then analyzes 12 other advantages advocated by proponents of the method and presents evidence and arguments to show the invalidity of—or lack of supporting research data for—these claims. He is particularly devastating in an analysis of the four benefits Bruner claims for the method. Although showing that many of the arguments advanced for the discovery method have not yet been supported by research evidence or, on the other hand, are repudiated by existing evidence, Ausubel nevertheless concludes that "learning by discovery has its proper place among the repertoire of accepted pedagogic techniques available to teachers. For certain designated purposes and for certain carefully specified learning situations, its rationale is clear and defensible."[40]

Problems in the Use of Structured Knowledge

As we stated previously, the school curriculum always has content, always involves the acquisition of knowledge by one means or another. The concern of the educator is what knowledge is of most importance for pupils, how it shall be selected, and how it shall be organized and used. In concluding this discussion we turn our attention to some problems to be faced and some cautions to be sounded in the use of the structure of knowledge as the basis for organizing content of some of the school subjects.

1. A school curriculum based on a structural organization has not been fully accepted by scholars in particular fields,[41] nor by a great many teachers and other school curriculum planners. This fact in itself does not vitiate the approach, but suggests that schools do not necessarily need to jump on a curriculum bandwagon in order to have a valid content organization for these particular school subjects. Research has not yet established the superiority of these new curriculum approaches and materials, nor has it disproved it. Tryouts, experimentation, refinement, and revision have, of course, been carried on, but basic evaluation of the various approaches to content selection and organization is still to be done in many of the subject fields.

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[39] Ausubel, "Learning by Discovery," p. 22.

[40] *Ibid.*, p. 53.

[41] See, for example, Benjamin De Mott, "The Math Wars," in *New Curricula*, pp. 54–67; Morris Kline, "The Ancients Versus the Moderns: The Battle of the Books," and Albert E. Meder, Jr., "The Ancients Versus the Moderns—A Reply," *Mathematics Teacher*, 51:418–433 (October, 1958).

2. The organization of content in the disciplinary subjects on the basis of structure may—and probably does—militate against the proper emphasis on other goals of education that should be sought through these subject fields. Teachers, curriculum directors, and supervisors—the professionals who formulate curriculum plans—must, in the final analysis, view schooling broadly and make certain that the curriculum adequately serves all the significant goals of education. When structured content in disciplinary fields best serves some important goals of education, educators should, of course, turn to the scholars in these fields for materials and recommendations for teaching it; but in developing plans for the attainment of other objectives they will, similarly, seek the counsel and assistance of specialists in these areas. And the educators themselves must correlate and integrate all the parts into a unified plan of education for all the children of the community.
3. Scholars themselves do not fully agree on what constitutes *the* structure of a discipline, or, in fact, whether there is one structure that characterizes a discipline, or the best ways to arrive at an understanding of the structure or structures that characterize a field.
4. If a structural organization of the disciplines taught in the school curriculum is desirable, the task of preparing the materials and reeducating teachers to use them is a tremendous one—particularly if the disciplines are to be designed for the entire period of schooling, including the general education aspects of higher education. This fact should not deter the profession from getting on with the job, but it does mean that schools face unforeseen delays in using this type of subject organization in all disciplinary fields. Gordon B. Turner, speaking for the American Council of Learned Societies, states the situation: "Redesigning the entire school curriculum so that it will clearly reflect the most profound and pervading ideas and attitudes of the humanistic and social science disciplines is obviously going to be a Herculean task. . . . Then to fit these materials to the capacities of children throughout twelve years of school will add immeasurably to the complexity of the task."[42]
5. In their use of structurally organized content in the disciplinary fields, the schools should adhere to sound psychological principles of learning in selecting content for each level and for each group of pupils, and in teaching these concepts of structure. Regardless of how content is organized, the units selected for study should be meaningful to the pupils and be understandable at their levels of comprehension. And both teaching methods and content should take account of readiness. This topic is discussed in the next chapter, but the eagerness of some scholars in academic fields to reform aspects of the curriculum piece-

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[42] Gordon B. Turner, "The American Council of Learned Societies and Curriculum Revision," in *New Curricula*, p. 151.

meal suggests that consideration of the psychological aspects of curriculum planning be kept in the forefront of any discussion of content. Turner, reflecting the discussions of members of the learned societies at the Endicott House conference, states that "most of the ideas that are basic to the scholarly disciplines will be incomprehensible to young children if they are presented in formal terms or expressed as verbal concepts."[43]

In concluding our consideration of knowledge, its organization and place in the curriculum, the extended recommendations of Joseph J. Schwab on the teaching of structure and the use of disciplined content in the schools[44] seem particularly appropriate:

> I imagine, then, a school curriculum in which there is, from the start, a representation of the discipline. In the earliest grades this component would be small. The bulk of knowledge learned would appear as simply true; skills would appear as the unquestioned right way to do things. But even here, the discipline would begin to take a stand. It would appear in two forms. First it would appear as small problems—tempered to the age and ability of the child—typical of some or all of the disciplines. . . .
>
> The disciplines would appear, second, as fragments of a narrative of enquiry. . . . *some* knowledge would be imparted, not as truths out of the nowhere but as conclusions from evidence, or decisions from thought-about alternatives and their consequences.
>
> As the child moved onward in age and competence, the disciplinary components would increase in length and frequency. . . .
>
> At about the high school level or a little sooner, the structures of the disciplines would be introduced in still another form. They would be represented by examples of the uncertainties, the differences of interpretation and the *issues* of principles which characterize the disciplines. . . .
>
> Also at the high school level—and perhaps only for some upper fraction of the student population—the disciplines would appear in still a fourth form. Just as narrative of enquiry was earlier used to replace dogmatic instruction, so now, original, first-order materials would begin to displace the narrative of enquiry.
>
> . . . The point to be emphasized for the curriculum of the high school is that here, *regardless* of immediately practical value, important aspects of a discipline, as such, would find a larger place than they would at earlier levels of the curriculum.[45]

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[43] *Ibid.*

[44] The reader may also like to examine the proposals of Alice Miel, "Knowledge and the Curriculum," in *New Insights and the Curriculum*, pp. 87–103; and Philip Phenix, *Realms of Meaning*.

[45] Joseph J. Schwab, "Education and the Structure of the Disciplines," pp. 43–45, *passim*. Reprinted by permission of the author and the National Education Association.

Now that we have considered knowledge and its organization, our understanding of the process of curriculum planning has been advanced. In Chapters 2 and 3 consideration was given to the two fundamental factors underlying all educational planning of any kind—the children and youth to be educated and the society that establishes, operates, and plans the program of education. But in planning, organizing, and carrying out an educational program, represented, at least in major part, by the curriculum plan, additional factors must be taken into account. The chief of these is the body of knowledge available for educational purposes and the ways in which this content may be selected and organized for use in developing learning activities. Thus knowledge becomes one of a number of additional data sources (for a list and a discussion of these factors, see Chapter 8) to be used in developing a program of education. Although recognizing its importance as a factor in curriculum planning, we nevertheless do not believe it is one similar in nature or comparable to the two that are fundamental to all educational planning. Knowledge should not be regarded as a part of that set of data sources, but rather as one of a set of additional factors, which nonetheless may be fully as important or restrictive, that determine the nature of the schooling provided the pupil.[46]

The nature and aims of the educational program a society provides for its young will be determined by its conception of the nature of children and their development, and of the values, beliefs, ideals, and faiths it seeks to perpetuate—its aspirations, and its expectations of the educational instrumentalities—rather than by the knowledge it uses and has available for use; otherwise, we may ask, Why do educational programs differ from nation to nation, although the same body of knowledge is available to all of them?

Obviously, there would be no curriculum—in fact, no school, no society as we know it—if there were no knowledge on which to build educational activities. Knowledge is the basic stuff out of which we fashion a curriculum. But this is not to say that thereby it becomes a primary source for determining the goals of society, and hence of the schools established by a society, any more than to say that the bricks, steel, and glass of a building determine the nature and character of the building itself or the purposes for which it will be used.

FOR FURTHER STUDY

ELAM, STANLEY, ED. *Education and the Structure of Knowledge*. Chicago: Rand McNally & Company, 1964.

These eight essays define and analyze "Knowledge structure," and examine its bearing on education. Authorities from different subject fields or

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[46] For a contrary point of view see Arthur W. Foshay, "A Modest Proposal," *Educational Leadership*, 18:506–516 plus (May, 1961).

areas of scholarly study analyze the nature of knowledge, its selection, and organization. Ausubel's chapter on psychological considerations is especially useful.

Faunce, Roland C., and Nelson L. Bossing. *Developing the Core Curriculum.* 2nd ed. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958.

A comprehensive analysis of core curriculum plans in the secondary school. Defines and states the purposes of core plans.

Ford, G. W., and Lawrence Pugno, eds. *The Structure of Knowledge and the Curriculum.* Chicago: Rand McNally & Company, 1964.

Five essays probe the structures of four specific disciplines. The use of structure in selecting and organizing content in these fields is discussed. Recommendations for curriculum development and teaching are made.

Herrick, Virgil E. "Elementary Education-Programs," and William G. Brink, "Secondary Education—Programs," in Chester W. Harris, ed. *Encyclopedia of Educational Research.* 3rd ed. New York: The Macmillan Company, 1960, pp. 430–442 and 1259–1272.

Excellent analyses of methods used to organize the curriculums of the elementary and secondary schools and of problems and issues in curriculum designing.

Phenix, Philip H. *Realms of Meaning.* New York: McGraw-Hill Book Company, Inc., 1964.

States the thesis that general education is the process of engendering meanings. Six realms of meaning are identified. The contribution of various subject fields to the realms of meaning is postulated. Part III discusses specific problems of organizing the curriculum, such as scope and sequence, and the selection and use of content.

Project on the Instructional Program of the Public Schools. *Planning and Organizing for Teaching.* John I. Goodlad, writer. Washington, D.C.: National Education Association, 1963.

Chapter 2 discusses the organization of the curriculum. Bases for such organization and factors to be considered in developing a curriculum are analyzed. A penetrating statement on curriculum organization.

Shuster, Albert H., and Milton E. Ploghoft. *The Emerging Elementary Curriculum.* Columbus, Ohio: Charles E. Merrill Books, Inc., 1963.

Part I discusses design and the bases for planning the curriculum for the elementary school. Part II treats the various subject fields and matters of scope and sequence in each area.

Sowards, G. Wesley, and Mary-Margaret Scobey. *The Changing Curriculum and the Elementary Teacher.* San Francisco: Wadsworth Publishing Company, Inc., 1961.

A comprehensive book on curriculum planning for the elementary school level. Chapter 7 discusses general curriculum patterns and designs; Part III, the development of design in each subject field.

Taba, Hilda. *Curriculum Development: Theory and Practice.* New York: Harcourt, Brace & World, Inc., 1962.

Chapter 12 is on the nature of knowledge; Chapters 17, 18, 21, and 22 discuss the design and organization of the curriculum. A comprehensive treatment.

CHAPTER 6

Learning as a Basis for Curriculum Planning and Teaching

Schooling is a social process, provided by a society for the education of the young. Learning is individual: it is what happens to a person as a result of schooling and other experiences. What pupils learn from the educational activities provided by the school, as well as the effectiveness of such learnings in guiding future actions, is obviously a very important consideration for those charged with the responsibility of planning and guiding the development of school experience—that is to say, the curriculum worker. Psychological theory gives the curriculum worker a lead to the act of schooling the child: education itself is the interactive process between a learner and a society. A theory of learning enables the representatives of society—the teacher and his co-workers in curriculum planning—to select the kinds of educational experiences and to guide pupils in their execution so as best to teach the young and so they will best retain the learnings that the social group deems essential for membership in the society.

THE USE OF LEARNING THEORY IN CURRICULUM PLANNING

The primary function of the school is to provide pupils the opportunity for participating in learning experiences that will result in new patterns of behavior, the acquisition of knowledge, the development of attitudes for the guidance of behavior, concept formation, formulation of value systems, modifications in self-concepts and aspirations, and the improvement of aesthetic satisfactions. These are the products of learning. If teachers and other curriculum planners are to be skillful in planning and guiding the development of experiences for such purposes, they must have a thorough knowledge of the process of behavioral change; otherwise their efforts may fall far short of the objectives sought.

In his excellent analysis of an "instructional system," Glaser identifies the four basic aspects of teaching and in Figure 7 shows the relationship of research to all four:[1]

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[1] Robert Glaser, "Psychology and Instructional Technology," in Robert Glaser (ed.), *Training, Research and Education* (Pittsburgh: University of Pittsburgh Press, 1962), p. 6.

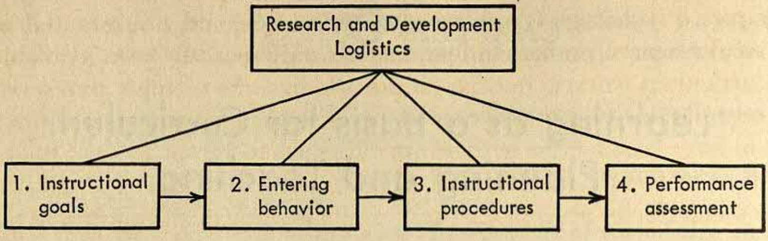

Figure 7: The Component Phases of an Instructional System

His discussion points out the relevancy of research to planning, but he notes the inadequacies in research findings applicable to each of these aspects of instruction.

Research and empirical evidence show all too tragically the ineffectiveness of some of our school instruction in achieving the basic goals for which it was planned. Failure to observe important principles of learning in the selection and development of school activities is, in part, the reason for this lack of accomplishment. Too often in educational circles, individuals and agencies are so intent on compelling pupils to fit into a curriculum that is designed on the basis of their narrow conceptions of the educational process, with respect to either the social basis of education or the nature of learning, that the results are indeed meager, and both children and society suffer.

Experimental and theoretical psychologists have been especially critical of the failure of educators to base the work and program of the school on a defensible psychology of learning. Travers, for example, claims that "history has shown little enthusiasm for educational reform based on systematic research of the kind in which the scientist engages,"[2] and Estes in his encyclopedic article concludes that "the reader . . . will recognize that no convergence is imminent between the educator's and the laboratory scientist's approaches to learning."[3] When the curriculum worker has made efforts to apply learning theories to educational planning, both of these psychologists point out the one-sidedness and inadequacy of the treatment. But the psychologist himself is to blame, too, for the deficiences of school practice. Many of his experiments have been with lower types of animals, in which reasoning and cognition are not as significant a factor as in school children, and often he fails to apply his research findings to teaching.

Some of the inadequacies of curriculum planning cited by psychologists in the past have been due to uncertainty about learning theory and principles. Psychology is a relatively new science, and a substantial body of useful research on human learning has only recently been available to the curriculum worker. But the failure of educators to apply unreservedly the postulations and hypotheses of psychologists to educational practice may in large part be due to their unwillingness to accept some of the basic premises of the theorists, for, as Allport points out, "theories of learning (like much else in psychology) rest on the investigator's conception of the *nature of man*. . . . psychologists who investigate (and theorize about) learning start with some preconceived view of the nature of human motivation."[4] The fact is that many educators, rightly or wrongly, refuse to accept many psychologists' conceptions of man and of his place in the universe of things. Two experimental psychologists have discussed in some detail the problems of relating research evidence and theories of learning to teaching and educational planning[5] and Gage distinguishes between a theory of learning and a theory of teaching.[6]

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[2] Robert M. W. Travers, "A Study of the Relationship of Psychological Research to Educational Practice," *ibid.*, p. 525.

[3] William K. Estes, "Learning," in Chester W. Harris (ed.), *Encyclopedia of Educational Research* (3rd ed.; New York: The Macmillan Company, 1960), p. 767.

But, as Goodwin Watson[7] points out and as will be discussed later, the various schools of psychology are in substantial agreement on a sufficient body of principles that curriculum planning need no longer be as psychologically invalid as too much of it has been in the past. The desirability of utilizing this body of knowledge about learning is evident, but the need is particularly great at the present time, since many committees of scholars, some of whose members have not had the empirical knowledge gained by classroom teaching in the common school, educational foundations with their own points of view to promote, and organizations, whose authorities are not students of educational theory, are now assiduously offering proposals, plans, and curriculum guides for the reform of the schools.

However, in view of the great mass of research data available and the intricate and involved nature of various theories of learning, it is unreasonable to expect all curriculum workers to master, along with all the other knowledge they must possess, these highly technical materials and to be in a position to winnow the findings for basic principles and concepts applicable to school practice; rather, it seems more reasonable to recommend that educational agencies and organizations with adequate prestige among educators, state departments of education, and the

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[4] Gordon W. Allport, *Pattern and Growth in Personality* (New York: Holt, Rinehart and Winston, Inc., 1961), p. 84.

[5] Kenneth W. Spence and Arthur W. Melton, "A Symposium: 'Can the Laws of Learning Be Applied in the Classroom?'" *Harvard Educational Review*, 29:83–95 (Spring, 1959).

[6] N. L. Gage, "Theories of Teaching," in Ernest R. Hilgard (chm.), *Theories of Learning and Instruction*, 63rd Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1964), Chap. 11.

[7] Goodwin Watson, *What Psychology Can We Trust?* (New York: Bureau of Publications, Teachers College, Columbia University, 1961), pp. 1–2.

United States Office of Education now ask psychologists to work with educators, as they have done with training officials in the armed services of the government, in delineating the nature of learning experiences in school situations that would square with widely accepted principles of learning. One such modest effort illustrates possibilities of this sort.[8] But most helpful of all is the yearbook prepared by an eminent group of psychologists and educators which not only ably defines learning theory for the curriculum worker but presents illustrative applications to practice.[9]

Regardless of the state of the field, it is essential that we recognize that a good understanding of the principles of learning contributes significantly to the curriculum worker's ability to

plan learning activities that will be most effective in helping pupils attain the outcomes desired;
adapt instructional methods and procedures to the interests, needs, capacities, talents, and maturity of individual pupils;
use teaching materials, content, and methods that arouse a high level of motivation among pupils participating in a learning situation;
create a desire among pupils to learn and to take responsibility for self-development;
plan instructional activities on the basis of how children learn;
select the most appropriate teaching methods and materials for the achievement of a specific purpose or aim;
assist the pupil in the development of character, the formulation of attitudes, and socially approved ways of behaving;
guide the physical, social, and emotional development of children;
understand human behavior and the factors influencing it in particular situations;
formulate hypotheses and carry out research that will test the effectiveness of teaching; and
understand the forces that produce change in human behavior and use such forces with discrimination and insight.

THE NATURE AND PROCESS OF LEARNING

As Hilgard, Marquis, and Kimble[10] point out in their comprehensive analysis, learning has been defined on the basis of both product and process. Definitions of learning as a product or an observable event refer to more or less permanent changes in behavior which occur as a result of experience. As a process, learning is defined as a neurophysiological phenomenon or a process of perceptual reorganization, involving a high degree of cognition. McDonald identifies three aspects of learning: a desired response must be elicited; the response must be related to a stimulus, either internal or external, and the association of stimulus and response must be strong enough so that the stimulus will increase the probability of the occurrence of the response to the stimulus in the future.[11]

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[8] Wesley C. Meierhenry (ed.), *Learning Theory and AV Utilization* (Supplement 4, AV Communication Review; Washington, D.C.: National Education Association, 1961).

[9] Hilgard, *op. cit.*

[10] Ernest R. Hilgard and Donald G. Marquis (revised by Gregory A. Kimble), *Conditioning and Learning* (New York: Appleton-Century-Crofts, Inc., 1961), Chap. 1.

Definition of Learning

The definition of learning by Hilgard, Marquis, and Kimble is accepted as most meaningful and useful to curriculum workers: "Learning. A relatively permanent change in response potentiality which occurs as a result of reinforced practice." And Robert M. Gagné in a significant book on learning affirms this definition in stating that *"learning is a change in human disposition or capability, which can be retained, and which is not simply ascribable to the process of growth."*[12]

By use of the concept "response potentiality," this definition accepts the acquisition of knowledge and concepts, in which no overt change in behavior is observable, as learning. A high school pupil who acquires the ability to solve quadratic equations in algebra has learned something whether or not he ever uses his knowledge to change his behavior in new stimulus situations. His "response potentiality" has changed; he has learned—he is in a position to use this learning in guiding behavior in the future if he considers such a response to be appropriate. Of course, he usually will need, sooner or later, to use the learning in behavior, depending on the nature of the thing learned and its significance to him, or what was once learned will be forgotten. But many factors affect forgetting, which makes successful teaching even more difficult to achieve.

This definition, as is true of practically all statements about the nature of learning, shows the necessity of experience in learning. It also emphasizes that something of a more or less permanent nature must happen. Four conditions, therefore, are essential to learning: change, experience, reinforcement, and potentiality of response. The curriculum worker should have these characteristics of learning in mind as he plans an educational program for children.

Psychologists have postulated a number of broad basic theories about the nature and process of learning. It is highly important that the curriculum planner be familiar with these theories, and that he decide for himself which ones best provide a structure for the experimental evidence. This brief review of the major theories will not suffice for a definitive study of the subject, but our purposes are to illustrate the range of concepts and the general principles inherent in each theory and to urge further study of this important factor in planning.

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[11] Frederick J. McDonald, "Motivation and the Communication Process," in Meierhenry, *op. cit.*, p. 59.

[12] Hilgard and Marquis (and Kimble), *op. cit.*, p. 481; and Robert M. Gagné, *The Conditions of Learning* (New York: Holt, Rinehart and Winston, Inc., 1965), p. 5.

Both Hilgard[13] and Estes[14] point out that psychologists accept the same body of factual evidence and that there is much in common among theories. Some represent "alternative modes of description, each offering advantages on some occasions and for some purposes." Nevertheless, the differences are significant for the curriculum planner. We will group the theories in three major categories: stimulus-response, functional, and cognitive. Not all variations can be readily subsumed under these headings, but the classification will serve our purposes. The student of learning theory, however, may also wish to ponder Allport's classification of three psychological models of man as a basis for analyzing learning theory.[15] And he should be aware of the high interest currently being taken in the development of mathematical models of learning.[16] Some psychologists believe that this approach may be the line of progress in the years ahead.

Stimulus-Response Theories of Learning

The stimulus-response theories of learning include the more specific ones of connectionism, conditioning, stimulus-response, and behaviorism. They stem from the classical research and writings of Pavlov[17] and Thorndike.[18] Later members of this school include Estes,[19] Guthrie,[20] Hull,[21] Mowrer,[22] Skinner,[23] Spence,[24] and Watson.[25] Hilgard, Marquis, and Kimble[26] have written an excellent analysis of research applicable to this approach, as well as to others, and applications of this cluster of theories to education were made in a section of a yearbook published some years ago.[27] Hill has analyzed the theory in a more recent yearbook on the same subject.[28] Michael and Meyerson have made one of the most useful short summaries of this theory, with applications to one aspect of teaching.[29]

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[13] Ernest R. Hilgard, *Theories of Learning* (2nd ed.; New York: Appleton-Century-Crofts, Inc., 1956), Chap. 1.

[14] Estes, *op. cit.*, p. 753.

[15] Gordon W. Allport, "Psychological Models for Guidance," *Harvard Educational Review,* 32:373–381 (Fall, 1962).

[16] See particularly, Robert R. Bush and William K. Estes (eds.), *Studies in Mathematical Learning Theory* (Stanford, Calif.: Stanford University Press, 1959); and Frank Restle, "The Relevance of Mathematical Models for Education," in *Theories of Learning and Instruction,* Chap. 5.

[17] Ivan P. Pavlov, *Conditioned Reflexes* (translated by G. V. Anrop; New York: Oxford University Press, 1927).

[18] Edward L. Thorndike, *The Fundamentals of Learning* (New York: Teachers College, Columbia University, 1932).

[19] William K. Estes, and others, *Modern Learning Theories* (New York: Appleton-Century-Crofts, Inc., 1954).

[20] Edwin R. Guthrie, *The Psychology of Learning* (rev. ed.; New York: Harper & Row, Publishers, Inc., 1952).

[21] Clark L. Hull, *A Behavior System* (New Haven, Conn.: Yale University Press, 1952).

These hypotheses about learning are all based on the study of behavior in an objective, experimental manner, in which a simple language is used to describe observable events. The three basic elements in learning, according to these psychologists, are stimuli (S), responses (R), and the interaction (⟶) between them. The stimulus is an environmental factor, and the response is behavior. The interaction is how these two relate themselves in the behavior of a human being. The association of stimulus and response is learning. Whether it takes place or not, and whether such association is available to guide future actions of the individual is the basis for building a learning theory. Some members of this group of psychologists add a motivational factor to the theory, which affects the nature of the relationship; others do not.

The wide acceptance of the S-R type of psychology is due, Kendler maintains, to the fact that "conditioning provides the clearest picture of how a response becomes associated with a stimulus, and how this connection can be strengthened or weakened. In this complicated world of behavior, conditioning provides the *simplest* form of learning. By observing it closely one can uncover the secrets of the learning process."[30]

Stimulus-response (S-R) psychology, then, is a basis for analyzing behavior, just as the physical scientist analyzes light into rays, or matter into atoms.

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[22] O. Hobart Mowrer, *Learning Theory and Behavior* (New York: John Wiley & Sons, Inc., 1960).

[23] B. F. Skinner, *The Behavior of Organisms* (New York: Appleton-Century-Crofts, Inc., 1938); and *Science and Human Behavior* (New York: The Macmillan Company, 1953).

[24] Kenneth W. Spence, *Behavior Theory and Conditioning* (New Haven, Conn.: Yale University Press, 1956).

[25] John B. Watson, *Psychology from the Standpoint of a Behaviorist* (Philadelphia: J. B. Lippincott Company, 1919).

[26] Hilgard and Marquis (and Kimble), *op. cit.*

[27] T. R. McConnell (chm.), *The Psychology of Learning*, 41st Yearbook, Part II, National Society for the Study of Education (Chicago: University of Chicago Press, 1942).

[28] Winfred F. Hill, "Contemporary Developments within Stimulus-Response Learning Theory," in *Theories of Learning and Instruction*, Chap. 2.

[29] Jack Michael and Lee Meyerson, "A Behavioral Approach to Counseling and Guidance," *Harvard Educational Review*, 32:382–402 (Fall, 1962).

[30] Howard H. Kendler, "Stimulus-Response Psychology and Audiovisual Education," in Meierhenry, *op. cit.*, p. 35.

Stimulus-response psychology, even for those who do not accept such a generalization of the data of behavior, has much to contribute to an understanding of the acquisition of knowledge and skills, the place of rewards in learning, the necessity of reinforcement of approved responses, the nature of extinction, transfer, and retention of responses, the place of continuity in learning, discrimination as a basis for learning, the relationships which determine the effectiveness of a reinforcing procedure for achieving a given end, the adverse effects of delay in providing reinforcement, the role of punishment in extinction, the efficiency of practice, and the basis for discriminative learning.

This set of beliefs is especially useful to the teacher and other educational workers in planning the day-by-day activities of the classroom, and in developing a mastery of responses to stimulating situations. Much of the teaching of reading, arithmetic, the manipulative skills, such as those used in shop courses, typing, art, music, shorthand, driver education, and the like, and of factual information should make use of principles and concepts developed by the stimulus-response school of psychologists.

A significant further contribution of this group, particularly Thorndike's, has been the insistence on measurement. A science of education would be impossible without measurement—in fact, the behaviorist insists that the only scientific evidence in psychology is that obtained from an analysis of behavior, since it is observable and measurable. Whether one deprecates the testing movement today or not, he must recognize the necessity of obtaining valid evidence as a basis for educational planning. The deficiencies of the testing programs in education today lie, not in the act of measurement itself, but in the inadequacies of present-day measuring devices and of the methods used to measure the whole gamut of educational outcomes, the misuse and misinterpretation of test data, and the excessive reliance on similar measures of the same learning outcomes.

The principal weaknesses of the stimulus-response theories are a total lack of consideration or an inadequate treatment of the place of cognition, insight, understanding, motivation, and the perceptions of self in learning, the mechanistic and behavioristic concept of human behavior, and the inability of the group to explain adequately many aspects of behavior that are commonplace observations of teachers in classrooms. Allport expresses his scorn for such a limited approach to behavior in these words:

> If we ask, "What does it mean to be a human being?" this school of thought replies, "Man is one more creature of nature; his behavior though complex is predictable in principle. His present state is determined by his past state. A man's consciousness is unreliable and must be distrusted, preferably disregarded altogether. We seek the general laws of nature, not personal uniqueness. We study man, not men; objective reality, not

subjective." . . . Its methods are indeed scientific; but its primary postulate —that man is simply a reactive organism—is no more scientific than any other postulate.[31]

The most recent direct application of this concept of the learning process to educational practice is the development of the teaching machine and other forms of programmed learning and their use in instruction. This method of teaching stems directly from Skinner's hypothesis about learning and of operant conditioning.[32] Many of the principles of learning enunciated by the S-R psychologists are directly applied to teaching procedures in automated learning devices—conditioning, reinforcement, reward, practice, and continuity. In the learning of clearly defined acts of behavior, the machine is outstandingly successful; for the development of understanding and insight, the formulation of concepts and perceptions, and the refinement of values and attitudes the potentialities of the machine are limited.

Functional Theories of Learning

Functional psychologists occupy an intermediate position between the other two groups; hence their theories integrate concepts from both schools. Functionalism is based on S-R factors, but introduces other elements in the learning situation. Founders and leading authorities of these theories of learning are Angell, [33] Carr,[34] and Woodworth.[35] Dewey,[36] although a professional psychologist only in the early years of his career, is often called the "founder" of the school, using its concepts as a basis for much of his philosophy of education. His views on the educational process, problem solving, teaching methods, experience, and other curriculum subjects embody much of functionalism. Hilgard makes the interesting observation that recent developments in psychology may yet elevate Dewey to a prominent place in the development of learning theory.[37]

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[31] Allport, "Psychological Models for Guidance," *op. cit.*, p. 374.

[32] B. F. Skinner, "The Science of Learning and the Art of Teaching," *Harvard Educational Review*, 24:86–97 (Spring, 1954); and "Teaching Machines," *Science*, 128:969–977 (October 24, 1958).

[33] James R. Angell, *An Introduction to Psychology* (New York: Holt, Rinehart and Winston, Inc., 1918).

[34] Harvey A. Carr, *Psychology: A Study of Mental Activity* (New York: David McKay Company, Inc., 1925).

[35] Robert S. Woodworth, *Dynamic Psychology* (New York: Columbia University Press, 1918); and *Dynamics of Behavior* (New York: Holt, Rinehart and Winston, Inc., 1958).

[36] John Dewey, *How We Think* (Boston: D. C. Heath and Company, 1910); and *Democracy and Education* (New York: The Macmillan Company, 1916).

[37] Hilgard, *Theories of Learning*, p. 331.

Advocates of the functional theory in more recent years include McGeoch and Irion,[38] Melton,[39] Robinson,[40] and Underwood.[41]

The functional psychologist is interested in the purpose of behavior—why—as well as in what takes place. He is concerned about the adjustment of the organism to his environment, how he adapts himself to external conditions, especially those of a social nature. This theory gives great prominence to motives as a basis for responses, and to association—the relationship of events and responses to environmental stimuli and conditions. Functionalism, as the name implies, studies ways in which and the extent to which one thing, either a response or a stimulus, is a dependent variable, or function, as in mathematics, of an independent factor—a stimulus or a response.

Woodworth, particularly, in his dynamic concept of behavior emphasizes the importance of motivation, that is, of the learner's active role in determining the nature and course of his behavior, and consequently of what is learned. He inserts in the basic response mechanism, O, for organism, thus making the equation S→O→R. The individual himself decides what stimulus is to be taken account of, and what modes of behavior from those already learned or discovered from trial-and-error behavior are to be used in response to any stimulus to which the organism decides to react. This position postulates what Woodworth calls "situation-set" and "goal-set." The person, on the basis of his motives, or drives, is ready to act upon some stimuli in a situation, and to reject others. He is disposed to act in certain ways in terms of his goals. The learner's analysis of a situation in which he finds himself provides clues or a set, which guide his selection of the factors in the situation to which he will respond. Unlike Pavlov's dog or Skinner's pigeons, the behavior of a person can only be predicted, according to Woodworth and Marquis, by taking account of the individual as well as of the stimulus.[42]

To the functionalist behavior is primarily a matter of problem solving. An individual is confronted in his ongoing activity with a block or an obstacle to further activity—he faces a problem situation—and activity can continue in that situation only as he solves the problem. Melton believes that "the learning process is primarily a matter of the discovery of the adequate response to a problem situation and the fixation of the satisfying situation-response relationship."[43]

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[38] John A. McGeoch and Arthur L. Irion, *The Psychology of Human Learning* (2nd ed., New York: David McKay Company, Inc., 1952).

[39] Arthur W. Melton, "Learning," in Walter S. Monroe (ed.), *Encyclopedia of Educational Research* (2nd ed.; New York: The Macmillan Company, 1950), pp. 667–686.

[40] Edward S. Robinson, *Association Theory Today* (New York: Appleton-Century-Crofts, Inc., 1932).

[41] Benton J. Underwood, *Experimental Psychology* (New York: Appleton-Century-Crofts, Inc., 1949).

[42] Robert S. Woodworth and Donald G. Marquis, *Psychology* (New York: Holt, Rinehart and Winston, Inc., 1947), p. 208.

The important aspects of learning, therefore, according to Melton, are motivation, initial discovery of the adequate response, fixation of this response and elimination of erroneous ones, the factors that determine the rate of learning, the transfer of the learning to new situations, and the retention of learning.

Woodworth believes that activity under way itself becomes a drive or motive. There is a compulsion to complete the activity. Moreover, motives may become functionally autonomous, that is, they constitute drives to activity divorced from basic needs of the organism with which they may originally have been associated. Drives may set in motion other drives, fission-style. A motive is a persistent stimulus that causes the individual to act so as to fulfill the motivating force. Motives cause the organism to be active, they direct the activity, and they guide the selection of activities that are to be repeated and used again and of those to be eliminated: "Other things being equal, acts leading to consequences which satisfy a motivating condition are selected and strengthened, while those leading to consequences which do not satisfy a motivating condition are eliminated."[44]

For the functionalists, activity is the basic ingredient of a psychology of learning. Dewey adopted this concept as the basis for a philosophy of education that has dominated educational theory and practice since the 1920's. Learning occurs through acts and events. It results from doing. It best takes place when the pupil is faced with a problem which he actively seeks to solve. What constitutes a meaningful problem for him will depend on his needs, drives, and motives, and on the environmental situation itself. His situation- and goal-set will give direction and guidance to his motives. Learning results from the activities undertaken to resolve the problem situation.

The curriculum planner is well aware of the tremendous impact of this broad concept of learning (rather than a system) on education in the United States. Later in this chapter we will elaborate on the significance of this approach for education.

Cognitive Theories of Learning

The cognitive theories of learning include what are known as field, Gestalt, sign learning, cognitive, and classical Gestalt. They all give greater emphasis to the role of cognition than do the stimulus-response theories. Formulators of theories in this cluster include Koffka,[45] Köhler,[46] Lewin,[47] Tolman,[48] and Wertheimer.[49] Mowrer,[50] although included among those who support the connectionist approach, has nevertheless developed a two-factor system of analyzing learning that represents a comprehensive attempt to correlate principal parts of the various approaches, and that effort entitles him to inclusion in the cognitive school.

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[43] Melton, *op. cit.*, p. 670.

[44] John A. McGeoch, *The Psychology of Human Learning* (New York: David McKay Company, Inc., 1942), p. 574.

The cognitive concept of learning is so compatible with the experience of educators and those interested in teaching that many educational and general psychologists have used these theories extensively in the development of a psychological foundation for teaching and curriculum planning and for integrating the behavioral sciences.[51]

Of the two variables always present in a learning situation—the environmental situation of the moment and the state or condition of the organism—the cognitive or field psychologists place greater emphasis on the learner variable as a factor in behavior, and hence of learning, than do the association psychologists. Functionalism also takes greater account of the role of the individual in behavior, but nevertheless draws heavily on the facts of association for its theory of learning. On the other hand, the cognitive group of psychologists believes that the two basic determinants of behavior from the standpoint of the learner variable are perception and drive, need, or motive. Behavior, therefore, in a given environmental situation is primarily a function of perceptual field conditions and of the needs of the organism, which, in part, determine the nature of perception.

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[45] Kurt Koffka, *Principles of Gestalt Psychology* (New York: Harcourt, Brace & World, Inc., 1935).

[46] Wolfgang Köhler, *Gestalt Psychology* (New York: Liveright Publishing Corporation, 1947).

[47] Kurt Lewin, *Principles of Topological Psychology* (New York: McGraw-Hill Book Company, Inc., 1936).

[48] Edward C. Tolman, *Purposive Behavior in Animals and Men* (New York: Appleton-Century-Crofts, Inc., 1932).

[49] M. Wertheimer, *Productive Thinking* (New York: Harper & Row, Publishers, Inc., 1945).

[50] O. Hobart Mowrer, *Learning Theory and Behavior* (New York: John Wiley & Sons, Inc., 1960).

[51] Especially useful references of this sort include:

G. Lester Anderson (chm.), *Learning and Instruction,* 49th Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1950).

Jerome S. Bruner, "The Act of Discovery," *Harvard Educational Review,* 31:21–32 (Winter, 1961).

Jerome S. Bruner, Jacqueline J. Goodnow, and George A. Austin, *A Study of Thinking* (New York: John Wiley & Sons, Inc., 1956).

Bergen R. Bugelski, *The Psychology of Learning Applied to Teaching* (Indianapolis: The Bobbs-Merrill Company, Inc., 1964).

Arthur W. Combs and Donald Snygg, *Individual Behavior: A Perceptual Approach to Behavior* (rev. ed.; New York: Harper & Row, Publishers, Inc., 1959).

James E. Deese, *Principles of Psychology* (Boston: Allyn and Bacon, Inc., 1964).

Frederick J. McDonald, *Educational Psychology* (2nd ed.; San Francisco: Wadsworth Publishing Company, 1965).

George A. Miller, Eugene Galanter, and Karl H. Pribram, *Plans and the Structure of Behavior* (New York: Holt, Rinehart and Winston, Inc., 1960).

John M. Stephens, *The Psychology of Classroom Learning* (New York: Holt, Rinehart and Winston, Inc., 1965).

Asahel D. Woodruff, *The Psychology of Teaching* (3rd ed.; New York: David McKay Company, Inc., 1951).

Behavior is goal-directed; the organism is active, does something. Purposiveness is evident. Cognition determines how the learner will make use of the environmental factors; motivation determines the aspects of the situation which will interest him and to which he will pay attention. The Gestaltists base their theories on insight, and explain behavior as efforts to react on such insight. Again, this is a cognitive approach to behavior, making the individual himself the center of the action, not the stimulus situation, which, of course, is what common sense leads any layman to do. The learner's organization of the field he observes and of the situation in which he finds himself, which is a perceptual process, guides his behavior in terms of his needs, values, and motives.

Learning, according to this group of psychologists, results from a problem situation, and consequently is dependent on experience, on doing something about the solution or resolution of the problem (closure and reorganization). A person has a tension, a disequilibrium, in an unresolved situation which has significance for him in terms of his own personal situation. He must come to grips with the problem—he must seek a solution, a closure, a return to equilibrium, if you please; and his actions and hence his learning depend on his insight—his perception and analysis of the situation in terms of his own needs and motives.

Insight is dependent on four factors: the intellectual capacity of the organism; the past experience of the learner; the situational arrangement itself, so that the person can readily react to the necessary conditions or factors that should guide behavior; and some trial-and-error behavior that contributes to the development of insight. Thus the essential thing in learning is the ability of the individual to structure the situation, and these four aspects of insight contribute to structuring. Meaningful relationships become a principal factor in behavior.

Needs, valences, values, goal-sets, and hopes influence the individual in determining what become problem or tension situations, that is, what will cause disequilibrium, in the ways he perceives and organizes the field, in what constitutes a solution to the problem, or a closure of the structure, and, as a result, in what is learned. It should be particularly noted that perception is dependent on the needs of the individual. Thus, as Lewin[52] points out, all behavior is due to two forces: the cognitive field, and the basic drives of the individual. But it is the organism that determines what stimuli it will react to in the environmental situation.

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[52] Kurt Lewin, "Field Theories and Learning," in *The Psychology of Learning*, pp. 219–231.

Two personal factors that contribute to the learner's reaction to the stimulus situation are his level of aspiration and his ego involvement. The human being sets a level of aspiration for himself and this plays at least a part in determining his behavior. This, of course, is a concept closely related to goal-set, as formulated by the functional psychologists. Level of aspiration is determined by one's self-concepts, based on his own analysis of his abilities and talents and on his past successes and failures in dealing with a problem situation. But, obviously, many forces have molded any person's level of aspiration at any particular point in his life. The important thing is for educators to recognize the importance of this concept, and to plan ways in which teachers may assist in developing proper levels of aspiration.

Ego involvement simply means that the stimulus situation must have meaning and significance to the learner if he is to participate effectively and on a basis that will result in the acquisition of skills, attitudes, knowledge, appreciations, or ways of behaving that are consistent with the goals of education. Learning is most efficient when the learner recognizes meaning and significance in the stimulus situation, is highly motivated to act, becomes involved totally in the experience, is successful in attaining a satisfying result, and is able to organize his new learnings into a structure that harmonizes with or extends his present stock of learnings. Learning requires differentiation and then a restructuring of the field; the ability of a pupil to do this at a high level depends, in part, on natural capacity, but teaching contributes to a pupil's ability to define and reform an experiential situation.

This brief summary of three major clusters of learning theories has been presented to show the nature of theoretical formulations that may be of value to the curriculum planner in carrying out his part in educational planning, and the scope of these concepts. An effort has been made to cite pertinent literature which may be useful in making applications of theory to teaching methods and content selection.

Although, as Hilgard concludes after his extensive analysis of theories of learning, "there are no laws of learning which can be taught with confidence,"[53] there is a considerable body of experimental evidence which psychologists generally accept and which gives educators a basis for proceeding. And Hilgard himself, in a latter statement, presents a "strategy" for integrating learning theory and instruction.[54] Curriculum workers will undoubtedly agree with those psychologists who have been concerned with schooling that there are a number of kinds of learning, that learning is a complex process, and that principles need to be formulated which will give direction and help to the teacher in the development of learning activities of many varieties and types, and designed to serve different purposes. Learning to read in the first grade involves some psychological processes that are different from those involved in learning to analyze a complex compound in a chemistry class. But some principles will also be common to learning in both situations.

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[53] Hilgard, *Theories of Learning*, p. 457.

[54] Ernest R. Hilgard, "A Perspective on the Relationship between Learning Theory and Educational Practice," in *Theories of Learning and Instruction*, Chap. 17.

In the next section, we will consider some of the aspects of learning and their relation to curriculum planning.

FACTORS IN LEARNING

Behavior

The basis of all learning is behavior. The pupil must respond if learning is to occur. This is accepted as a truism by all schools of psychology. The first step in applying theories of learning to curriculum planning, then, is to consider some characteristics of behavior.

All behavior is motivated, although other factors also shape the nature of the behavior. Behavior is goal seeking. There is an end-in-view. Behavior originates in the needs system of the organism; it is the result of a tension, a disequilibrium, or a motive that spurs the individual to action. Attainment of the goal results in a reduction in the tension, a satisfaction, at least in sufficient measure, of the need, or adequate fulfillment, at least under the circumstances, of the motive. The goal is selected from those things possible in the environmental situation because it promises to gratify the need and to reduce the tension state. Hence the goal-in-mind serves to give direction to behavior, to channel it, and to establish preferences among the elements present in the environment.

But the environment, nevertheless, structures the behavior and confines it to action feasible under the circumstances. A schoolboy may seek to serve his need for self-actualization by creating something, but if the school has no art materials, or administrative provisions are such that he is not permitted to use them, he must turn to some other method of behavior, or stifle fulfillment of the need at that time. Many acts of misconduct or antisocial behavior in school may be protests against the inability of the person to serve some need that is not fulfilled by accepted acts.

The learner himself determines how he will behave in the given environmental situation. As has been stated, his interpretation of the situation, the things to which he gives attention, his analysis of the Gestalt, his perception of conditions and factors, and the ways in which he relates himself to the situation—his aspirations and goals—are all functions of the organism. Past experience and what he has learned previously guide the individual in his behavior. Behavior which has been satisfying (reinforced) in the past will tend to be used when applicable in the new situation. The setting of the goals themselves, the motives that energize behavior—aspiration level, perception—all are affected by past experience.

In turn, behavior in a situation which has led to the attainment of the goal, to the reduction of the tension and the satisfaction of the need is strengthened, or reinforced, or learned, and will thereby tend to be used again in comparable stimulus situations.

In behavior, then, we must consider the same two basic elements that characterize all psychological postulations: the organism, and the stimulus situation.

These characteristics of the individual influence his behavior:

1. Heredity
2. Age
3. Sex
4. Capacities and abilities
5. The needs system
6. The cognitive-attitudinal-value system
7. Perception of the objective characteristics of the environment
8. Aspirations and concept of self in relation to the situation
9. Drive state

Stimulus situations are of many kinds, but two general categories are those which the individual seeks out, welcomes, or at least anticipates because of his drives, motives, or goal-set at the time, such as pupil going to the library to obtain some information for a report he is to make in class, and those in which he has little or no control over the situation in which he finds himself, such as coming to a class and being informed by the teacher that the class will now take a test over some assigned readings. Most stimulus situations have some elements of both characteristics.

As McDonald[55] points out, these behavioral variables have a great deal of interrelatedness. For example, the stimulus situation and the needs system are related, since the environment can arouse need satisfaction, and, similarly, needs cause the individual to seek out a suitable situation in which he may gratify them. Similarly, the stimulus situation and the cognitive-attitudinal-value system are interrelated. The meaning of the environment for satisfaction of needs depends on concepts, attitudes, and values of the person, which, in turn, are in large part the products of past experience. A six-year-old child will not seek out a crossword puzzle in a magazine, but will eagerly hunt for a drawing in which he connects numbers in order to draw a rabbit.

Also, the needs system and the cognitive-attitudinal-value system are interrelated. Our needs shape our view of the world, and in turn we develop new attitudes and values; we have new drives and new forms for gratifying needs.

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[55] McDonald, *Educational Psychology,* Chap. 3.

The stimulus environment influences the person's conception of himself in the circumstance. The situation affects the way he sees himself reacting to it. Moreover, his own values and attitudes influence his conception of himself as a participant in the situation.

And finally, the results of behavior in a situation shape his conceptions of himself as a person, and cause him to restructure his own behavior, which is the definition of learning.

Motivation

As every teacher knows from his work with pupils day after day and year after year in the classroom, motivation is the *sine qua non,* the indispensable element, in learning. And, of course, motivation of some sort is always present, or there would be no response, no activity on the part of the child. But how to elicit the kinds of motivation that will result in an efficient learning of the things deemed desirable by those responsible for the schooling of the child is the problem that confronts the curriculum planner.

Motivation is a concept, constructed by psychologists and eagerly accepted by teachers, which explains differences in behavior of an individual from time to time, and in the behavior of individuals in the same stimulus situation. We define motivation, therefore, as a condition of an organism in which bodily energy is selectively directed in behavioral acts in relation to the environment so as to attain a goal-object that is significant and meaningful to the individual.[56] The two fundamental components of motivation are a needs state in the individual, and a goal, or external stimulus, that will eliminate or reduce the need. Several component elements of the motivational concept also merit explanation.

Needs are internal conditions of the organism, produced either by internal stimulation, such as hunger, or by the appropriate external stimulus, such as a stone thrown at the person, which energizes the organism and causes him to act. Although all psychologists accept the necessity of postulating a needs condition, we again find differences among the proponents of the different theories of learning. The S-R psychologists make needs synonymous with drives and a drive state, but the field theorists, and particularly the subgroup that draws heavily on psychodynamics, give a much broader interpretation to needs, recognizing the dynamic force of personality itself, including the subconscious. We believe that the latter point of view squares with human experience, and provides a more serviceable concept for teachers. Accordingly, we list here Maslow's classification and statement of needs.[57] But it should be recognized that this is one person's formulation of the concept, and that it does not have acceptance among many psychologists as an adequate explanation of behavior, and certainly not a complete one. We also acknowledge the contributions which Prescott made some years ago to this concept.[58]

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[56] Bernard Berelson and Gary A. Steiner, *Human Behavior: An Inventory of Scientific Findings* (New York: Harcourt, Brace & World, Inc., 1964), p. 240.

THE BASIC NEEDS

I. The physiological needs

> Food, water, air, elimination, activity, rest, and sexual activity are the principal physiological needs. These needs are the most potent of all, and if the individual is really deprived, not just hungry, sleepy, constipated, or on the prowl for sex activity, all other needs are submerged until the primary physiological need is met. On the basis of continuous gratification of his physiological needs, the person is released from the domination of behavior by these wants and he turns to the gratification of higher levels of needs of a social nature.

II. The safety needs

> The need for safety may be seen as the reaction of an individual to sudden loss of support, to a loud noise, to rough handling, and to painful sensory stimulation. The reaction to illness also illustrates the safety need. Tension in an unfamiliar and unpredictable situation also results from this need. The child wants orderliness, undisrupted routine, and a rhythm of activities. A child confronted with the new, with the strange, with the unknown shows the danger reaction. He prefers "a safe, orderly, predictable, organized world which he can count on, and in which unexpected, unmanageable, or dangerous things do not happen."

III. Belongingness and love needs

> A person hungers for affection, for recognition by people who are important to him, for a place in his group. Love and affection become the new center for behavior when physiological and safety needs are gratified adequately for the person's well-being. The lack of satisfaction of the need for love and affection, when the other two more primary areas of needs in this hier-

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[57] Abraham H. Maslow, *Motivation and Personality* (New York: Harper & Row, Publishers, Inc., 1954), Chap. 5.

[58] Daniel A. Prescott, *Emotion and the Educative Process* (Washington, D.C.: American Council on Education, 1938), Chap. 6.

archy are met, is evident in many of the cases of maladjustment and psychopathology. To be psychologically healthy everyone must be accepted, loved, and respected by others. This is a basic human need.

IV. Esteem needs

All people need, first, a sense of adequacy, of achievement, of master and competence, of ability to face the world, and, second, a feeling of having status, recognition, approval, attention, prestige, and appreciation. Satisfaction of these needs results in self-confidence, pride in one's accomplishments, a feeling of worthwhileness, a strength to face up to situations. Gratification of these needs should, however, be based on competency and on actual achievements and accomplishments; unwarranted flattery or undeserved fame or praise is in the end a threat to the well-being of the individual.

V. Need for self-actualization

Man seeks self-fulfillment—the desire to be what he is capable of being. He desires to make actual what he potentially could be. This need necessitates

A. acceptance and expression of the inner core or self, i.e., actualization of these latent capabilities and potentialities, full functioning, availability of the human and personal essence; and
B. minimal presence of ill-health, neurosis, psychosis, of loss or diminution of the basic human and personal capacities.[59]

OTHER MOTIVATIONAL NEEDS

According to Maslow, after these categories of basic needs, arranged in a hierarchy of needs satisfaction, have been sufficiently met to serve the purposes of the individual, other needs also emerge. These include

VI. The desire to know and understand

Acquiring knowledge and understanding the universe are necessary for gratification of the basic needs, but in addition there exists a native curiosity, a desire to know, to explain, to analyze, to systematize, and to understand. Fulfillment of cognitive impulses is in itself satisfying. It should noted here in support of Maslow's concept that Dorothy Lee, the anthropologist, gives two dramatic examples of this drive to learn in the nonliterate society of the Oglala Indians and among the Jewish *shtetl* of Eastern Europe.[60]

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[59] Abraham H. Maslow, "Some Basic Propositions of a Growth and Self-Actualization Psychology," in Arthur W. Combs (chm.), *Perceiving, Behaving, Becoming*, 1962 Yearbook, Association for Supervision and Curriculum Development (Washington, D.C.: The Association, 1962), p. 36. (NOTE: This chapter by Maslow is essential reading for a curriculum worker who wishes to understand his point of view on human behavior and education.)

VII. The esthetic needs

For many people there is a need for symmetry, for closure, for completion, for beauty, *per se*. These needs may be closely related to self-actualization needs or even to safety needs.

Whether or not we accept Maslow's formulation of needs and his hierarchical system of needs gratification, it should be recognized that all psychologists, even the most hard-shell behaviorist, must postulate an energizing system in organisms that leads to behavior. This system simply is what is designated as needs or, a more restrictive term, as drives. The teacher has always been aware of these motivators, and it is to be hoped that psychologists in the future will devote more research efforts to a study of human needs and to ways of utilizing them in guiding educational endeavors.

Drives are neurophysiological conditions that release energy within the organism. This energy is directionless; it may serve a number of motivational objectives. Drive is an engine, not a steering gear. The drive of hunger, for example, is physical. Whether such a need as affection has a physiological basis has not been determined by research evidence. If we accept such a need as existent, it really makes little difference to the curriculum worker whether it has a physical base or not. It motivates regardless. The term "drive" has a more limited meaning than "needs."

Motive is an act of goal-seeking behavior. A motive energizes the organism to action and directs his behavior selectively to the attainment of a goal. Motivation is the total process; motive is the state of the organism. It is the thing that describes the joining together of drive and goal.

Goal is the directional aspect of behavior, the thing toward which the action is directed. To the individual, it promises satisfaction of the need. The goal is the outer component of motivation, the thing in the environmental situation that becomes associated with the gratification of the need. It holds promise of meeting the need; otherwise, it would not be the goal-object.

Motivation is a very complex factor in human behavior. "There are many different kinds of motivational phenomena,"[61] and probably, as Littman suggests in his lengthy analysis, it does not explain all behavior, for other essential elements are also present. Biological factors also determine the nature of behavior, such as capacities, abilities, sex, physical characteristics, metabolic rates, and the like. No matter how strongly motivated a boy in any school in America may be to run, play the piano, or express mathematical relationships, he is unlikely to run a mile in 3 minutes and 55 seconds, to play the piano like Van Cliburn, or to formulate an equation that expresses the relationship between mass and energy, as Einstein did. Behavior is also culturally determined. A girl in the United States has little or no interest in learning to weave a ryiji rug, although a girl in Finland is highly desirous of doing so. Spinning is not a goal-object in America in the 1960's. Interest in an activity is often situationally determined. There is little desire on the part of children in Florida to learn to ski; it becomes an all-engrossing interest for many children in Colorado or New Hampshire. But children throughout the United States are stimulated to play basketball. In the gestaltist sense, behavior is often explained by situational or field factors.

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[60] Dorothy Lee, "Developing the Drive to Learn and the Questioning Mind," in Alexander Frazier (ed.), *Freeing Capacity to Learn* (Washington, D.C.: Association for Supervision and Curriculum Development, 1960), pp. 10–21.

Robert W. White[62] has brought together a body of research on motivation into a concept of "competence motivation." This, he believes, is a motive that impels one to deal effectively with his environment. It is not a primary drive; rather, it explains the type of behavior of the human being that does not arise from a primary drive. It sustains the "process whereby the animal or child learns to interact effectively with his environment."

David C. McClelland and his associates have propounded an "achievement" motive. The evidence in support of such a factor in behavior is compelling. They believe that "the child's achievement expectations arising from the mother's demands or elsewhere are the source of his achievement motivation, since his own actions will then interact with those expectations in ways which will yield positive or negative affect."[63] Crandall has brought together an extensive body of evidence on achievement motivation.[64]

This desire to achieve, to be an effective person, to excel, to be oneself is also accepted by a Staff Committee of the Institute for Child Study, University of Maryland:

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[61] Richard A. Littman, "Motives, History and Causes," in Marshall R. Jones (ed.), *Nebraska Symposium on Motivation, 1958* (Lincoln: University of Nebraska Press, 1958), p. 163.

[62] Robert W. White, "Motivation Reconsidered: The Concept of Competence," *Psychological Review*, 66:297–333 (September, 1959).

[63] David C. McClelland and others, *The Achievement Motive* (New York: Appleton-Century-Crofts, Inc., 1953), p. 330.

[64] Vernon J. Crandall, "Achievement," in *Child Psychology*, 62nd Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1963), pp. 416–459.

> For the individual human being, the big striving, the one directional push and surge, from conception to death, is the urge to be and to become a human being. . . . Man grows, develops, and becomes primarily through learning, learning that is derived from his unique life experiences in his own unique ways. We are safe in saying, then, that man wants to learn; man has an inner push and urge to learn what can become meaningful to him. This urge to learn is operative throughout life and is present in all human beings.[65]

Much of the behavior of pupils in school may well be based on just such a cluster of closely related motives—competence, achievement, exploration, problem solving, and development through learning. Certainly they are a common-sense explanation of a great deal of the behavior of pupils in school.[66]

However, the curriculum worker is faced by the fact that our knowledge of motivation is really very meager. There is no royal road to learning that can be studied in books on teaching methodology and then be applied to the classroom situation. Hilgard and Russell summarize the state of affairs by saying that there is "no panacea for all the ills of indifference, dislike, and rebellion encountered in children placed in unsuitable school environments. . . . no known formula or infallible set of procedures to motivate all pupils at all times."[67] But we know there is something present in behavior that necessitates a construct that we call motivation. Teachers generally would agree with Dorothy Lee that "when the motivating force is lacking, no amount of removal of 'interferences' seems to bring about a strong development of the individual's capacity to learn."[68]

There is no learning unless there is a response. Motivation explains when and how the response may be made. The curriculum planner does have a body of psychological research and clinical evidence from psychiatry and psychopathology that gives us important guides for curriculum planning, formulation of school policy, and teaching. We agree with Glaser that "application of current theories of learning is less fruitful at present than the application of current findings."[69] Principles utilizing some of these findings are given later in this chapter and our model of learning, presented later, also draws on this knowledge.

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[65] A Staff Committee, Institute for Child Study, University of Maryland, "Human Development Principles," an unpublished paper prepared for the Project on the Instructional Program of the Public Schools, National Education Association, 1961, p. 5.

[66] Pauline S. Sears and Ernest R. Hilgard, "The Teacher's Role in the Motivation of Learners," in *Theories of Learning and Instruction,* Chap. 8.

[67] Ernest R. Hilgard and David H. Russell, "Motivation in School Learning," in *Learning and Instruction,* p. 37.

[68] Lee, *op. cit.,* p. 11.

[69] Robert Glaser, "Learning and the Technology of Instruction," in Meierhenry, *op. cit.,* p. 43.

Cognition, Perception, Self-concepts, Aspirations

In the actor-stimulus paradigm of behavior, and hence of learning, one of the most important regulators of behavior is the individual's perception of the environmental situation. All cognitive theories of learning are based on this factor. How the individual views the situation in which he is, how he structures it, how he organizes field, or figure and ground, for himself, how he sees himself in relation to the environment—in short, how he perceives the situation—become some of the most important factors in his behavior at the time. Bruner, a scholar of cognitive processes, insists that "indeed, we know now, after a quarter of a century of research on perception, that experience is not to be had directly and neatly, but filtered through the programmed readiness of our senses. The program is constructed with our expectations and these are derived from our models or ideas about what exists and what follows what."[70]

It is this emphasis on the role of the person himself in reacting to a stimulus that has made functionalism and, more particularly, cognitive theories of learning so acceptable to teachers. Hilgard states it thus: "a complete learning theory must incorporate perceptual processes as part of the main body of theory."[71] And Gardner Murphy, also an eminent psychologist, believes that "the mainsprings of action lie largely in a deep-seated, persistent need for cognitive orientation to life. . . . The cognitive need is as commanding and constraining, and at the same time as fulfilling, as any realization of the more primitive organic needs."[72]

Of great importance to teachers is the obvious fact that children depend on their sense organs for perceptions; if a child cannot use his eyes properly, cannot hear clearly, or has difficulty in sense acuity he is severely handicapped in organizing his environment and in using it effectively to achieve ends sought.

An individual's perception, his interpretation of an environmental situation, is a product of the interaction of the following factors in varying amounts for different individuals and for different situations:[73]

The actual environmental field itself
The ability of the individual's sense organs in providing sensory data about the environment
The capacities, talents, and abilities of the individual
The individual's needs
The individual's value system

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[70] Jerome S. Bruner, *On Knowing: Essays for the Left Hand* (Cambridge, Mass.: Harvard University Press, 1962), p. 120.

[71] Hilgard, *Theories of Learning*, p. 468.

[72] Gardner Murphy, *Freeing Intelligence through Teaching* (New York: Harper & Row, Publishers, Inc., 1961), pp. 34–41.

[73] Berelson and Steiner, *op. cit.*, pp. 98–116.

The individual's attitudes
The individual's goal-set
The individual's self-concepts and aspirations
The effects of past experience in situations involving some of the same elements
The anxieties, stresses, and tensions of the individual

The role of needs in behavior and in the organization of the field has already been discussed. The value system of the individual is also a potent factor in determining his perception of a situation. It influences the setting of goals and the selective response of the person to the situation.[74] Both values and goal setting are functions of needs, past experience, attitudes, and aspirations. The family, the social group, the peer group, associates, persons of prestige to the individual, a model-figure, the teacher—as factors in past experience—all contribute to the formulation of the value system, and hence to one's perception of any situation.

Self-concepts and aspiration levels are basic determinants of one's perception of a situation and hence of his behavior.[75] From infancy, the pupil has been building a self-image, a concept of himself as a human being, of his place in the world, of his successes and failures in dealing with his environment, of what he should deal with in his environment, and of how he should behave in reacting to it. Factors that influence the nature of his self-concept are his needs, his capacities and abilities, his drives, his reaction to what other people tell him about himself, his physical characteristics and status, his value system and goal-sets, and the effects of past experience in dealing with situations that have elements in common with the present one.

A teacher[76] assigns a set of arithmetic problems in the fifth-grade class to be done as homework. Four boys, as examples, react differently to this stimulus situation. One boy has great difficulty solving arithmetic problems. He does not have the intellectual capacity required for such an abstract process, or at least he has not been taught how to solve them with the capacity he does possess. He seldom solves assigned problems correctly, and because of this he is often berated by the teacher and sneered at by his classmates. He does not even take the list of problems home: he has no intention of doing them, and he has faced such a situation so frequently that he is relatively undisturbed by it. He plays football with the neighborhood children after school, in which activity he is successful; after the evening meal, he watches television until bedtime. A second boy believes he can readily solve the problems, but he has a paper route so will be busy until suppertime; he would like to watch a television show after that, but he feels that he should do the problems. His teacher expects him to turn in his solutions, and he does not feel comfortable with himself until he works them all, even though he is missing the television program.

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[74] Jerome S. Bruner and Cecile C. Goodman, "Value and Need as Organizing Factors in Perception," *Journal of Abnormal and Social Psychology*, 42:33–44 (January, 1947).

[75] For a comprehensive treatment of this aspect of behavior see Combs and Snygg, *op. cit.;* for an application of these concepts to education see Combs, *Perceiving, Behaving, Becoming.*

[76] Pauline S. Sears has made an extensive study of the methods used by teachers to motivate pupils; see her "Problems in the Investigation of Achievement and Self-Esteem Motivation," in Marshall R. Jones (ed.), *Nebraska Symposium on Motivation, 1957* (Lincoln: University of Nebraska Press, 1957), pp. 265–339; and Pauline S. Sears and Vivian S. Sherman, *In Pursuit of Self-Esteem* (San Francisco: Wadsworth Publishing Company, 1964).

A third boy solves problems easily. He often gets a perfect mark on his papers, and the teacher frequently has him show the class how to work a difficult problem. His mother is absent from the home working, but soon after letting himself in he sits down at the kitchen table and works the entire list in a short period of time. He then goes out and plays with the neighbor boys. The fourth boy has difficulty in solving problems, but he does work many problems correctly in class. Soon after he arrives home his mother insists that he get busy on his homework. He finds other things to do until finally his mother harshly orders him to sit down and get to work, threatening that he will not get his supper until the problems are solved. He dawdles over them, is unable to solve many of them, and obviously becomes quite tense. His mother continues to threaten him; finally he cries, so she helps him and at last the problems are done, but she continues to berate him, and he is tense and unhappy.

Three of the children solved the problems. Two of them simply made use of modes of response they already knew: one learned a few new responses to an arithmetic situation. All four boys learned or reinforced some other behaviors, too. All these learnings were the products of behavior, and the behavior was the response of an organism to an environmental situation, but to its interpretation of the situation for himself as an actor. Each responded in terms of his perception of himself in the situation and of his knowledge of the results of behavior in previous situations that, in his perception, had many of the same stimulus elements. The resulting behavior, and hence the learnings that were built into the response pattern, was different for each child, although three of them had their papers ready to give the teacher the next day.

A pupil's concept of himself as a student and as a person, his aspirations as revealed by his behavior in school, and his perception of any school situation are very important considerations in the total process of schooling.[77]

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[77] See especially Combs, *Perceiving, Behaving, Becoming,* Chaps. 6–15, for excellent discussions of these factors in learning, and examples of teaching that build on these aspects of behavior.

Readiness

The pupil's readiness for any particular learning experience in school is obviously an important consideration in planning instruction. Tyler states succinctly what teachers know from experience: "There can be little disagreement with the notion that pupils learn most effectively and efficiently when instruction is introduced at an appropriate time—neither too early nor too late but, rather, when they are ready."[78] But what constitutes readiness to learn is an indeterminate matter. Little definitive research on the psychology of readiness for particular types of behavioral experiences and on the capacity of the child to perceive and react realistically to a stimulus situation is available. Curriculum workers have long used a concept of readiness as a basic factor in selecting learning experiences for school pupils, but the criteria for appropriateness have usually been empirical evidence of teachers and some limited test results that compare outcomes of learning under instructional practices that are too often assumed to be valid for teaching that particular subject matter. Particularly in the field of mathematics, much of the recent reorganization of subject matter in the disciplines contradicts the usual school approach to readiness.

Readiness, as with every other psychological construct, depends on the actor—the organism subjected to the situation—and the environmental situation. A child may react to a situation by ignoring it—it simply does not affect his perception; by behaving in a manner not anticipated by the contriver of the situation, such as crying rather than attempting to work the problems, or grabbing the electric train off the track rather than excitedly watching it go around and around; or by acting in general in the manner anticipated by the outsider, so that approved responses can be reinforced. Readiness as viewed by educators is usually the last-named type of behavior.

From the standpoint of the actor (pupil), his behavior in a situation is shaped, as has been stated, by his sensory acuity, his capacities and abilities, his needs, his values, his goals, his perceptions, his concepts of himself, his aspirations, and his previous learnings. Certainly his sensory responses, his capacities and abilities, and his needs have a physiological dimension. His physical maturation in relation to these factors will be a determinant of behavior in a given situation. Other determinants of behavior all have an experience dimension. The individual's reaction to a situation, then, will depend on both physiological and experiential factors. To state that a five-year-old child is not "ready" to read may have some basis in physiology, but may or may not be a valid generalization of the experiential factor in behavior.

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[78] Fred T. Tyler, "Issues Related to Readiness to Learn," in *Theories of Learning and Instruction,* p. 237.

Recent studies of the relationship between school behavior and home conditions support the importance assigned to the experiential aspect of readiness to learn. This is to say that the kinds of experience provided a pupil in his out-of-school environment and previously in school is an important parameter of "readiness." Both physiological maturity and previous experiential background are highly individualized, so with two degrees of freedom present the school is faced with a complex situation in utilizing any factor of readiness in planning the curriculum for a class of thirty pupils. This is one reason that some new types of organization in the primary grades have had wide acceptance in recent years.

But the environmental, or stimulus, situation is also a determinant of behavior. Hence, readiness to undertake a learning experience is a function of teaching itself.[79] Curriculum planning in the past has too often assumed that pupils were not ready for certain kinds of behavior because the typical pupil was frustrated by the assignment or developed anxiety and tenseness as a result of demands by the teacher that he react in prescribed ways in the given stimulus situation.

Educators must also recognize that learning any given task is dependent on the possession of prerequisite knowledge or skills. The pupil must possess the necessary sets of subordinate learnings that are desirable or necessary for experiences of a higher order.[80] There is a hierarchical order for much of a pupil's schooling, and he will be unable to master or undertake a learning task if he does not possess the preliminary sets of learning that undergird it. Within recognized physiological limitations, this fact explains much of the difficulty pupils face in mastering school tasks. When a complex learning activity is subdivided into simpler component parts, the experience is a gradually developing one that builds step by step on subordinate learnings, the stimulus situation is such that pupils find meaning and significance in it, variant ways of responding are permitted, responses made on trial-and-error efforts or on the basis of past learning become developmental for the child; pupils often amaze teachers by the kinds of educational experiences they can undertake with enthusiasm and success.[81]

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[79] See Richard Alpert, "The Shaping of Motives for Learning," in Walter B. Waetjen (ed.), *Human Variability & Learning* (Washington, D.C.: Association for Supervision and Curriculum Development, 1961), pp. 22–40.

[80] Robert M. Gagné, "Military Training and Principles of Learning," *American Psychologist,* 17:83–91 (February, 1962); Robert M. Gagné and N. E. Paradise, "Abilities and Learning Sets in Knowledge Acquisition," *Psychological Monographs,* vol. 75, No. 14 (1961), pp. 1–23 (Whole No. 518); and Robert Gagné, *op. cit.,* chap. 7.

[81] For examples of curriculums that defy old concepts of readiness, see the summaries and references in Hazel Lindberg, "Mathematics in the Elementary School," *Educational Leadership,* 19:364–368 (March, 1962); and Kenneth D. Wann, Miriam S. Dorn, and Elizabeth A. Liddle, *Fostering Intellectual Development in Young Children* (New York: Bureau of Publications, Teachers College, Columbia University, 1962).

We, in general, support the point of view of the participants in the famous Woods Hole Conference of 1959 on readiness that "any subject can be taught effectively in some intellectually honest form to any child at any stage of development."[82] Whether any subject should be taught to any child at any level is a curriculum question, not a psychological one, and curriculum matters must be considered in additional dimensions.[83]

One of the most important factors in curriculum planning is the determination *for each child* of the appropriate level in his developmental pattern at which to offer him particular types of learning experiences.[84] Assumptions and practices in the past about readiness to experience and to learn have been based much too often on empirical evidence of the flimsiest sort, on hunches, and on a very questionable body of research, which tested wrong hypotheses or good hypotheses with inadequate evidence. But at this time, apologetically, we have little else to offer for the guidance of the teacher. Curriculum workers need much more research evidence on this subject, but in the meantime they can make some test trials of their own, such as offering in senior high school what have presumed to be college-level courses, giving reading experiences to four- and five-year-olds, providing experiences in abstract thinking at an earlier age than has been done, and the like.

The practice of some students of child development, school systems, and professional organizations of listing in a categorical manner the "normal" characteristics of children at five, six, seven years of age, and serially up through later adolescence should not be mistakenly used by the curriculum worker to rule out or brush aside educational practices that are designed to provide learning experiences adapted to the capacities, needs, and potentialities of each individual pupil. These developmental charts are based on the "average" of characteristics of growth found among many children; they provide us with some kinds of knowledge about pupils that are needed by educators. But individual differences are glossed over in such an approach. The curriculum worker must extend such a chart to include similar data for each child to be educated.

Any assumption about readiness for particular learning activities at a particular level of development should not be based solely on the experiences of the children studied, but should include a consideration of what may constitute readiness under a different cultural, social, and intellectual stimulus situation.

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[82] Jerome S. Bruner, *The Process of Education* (Cambridge, Mass.: Harvard University Press, 1962), p. 33.

[83] Hollis L. Caswell, "Difficulties in Defining the Structure of the Curriculum," in A. Harry Passow (ed.), *Curriculum Crossroads* (New York: Bureau of Publications, Teachers College, Columbia University, 1962), pp. 103–111.

[84] See also the significant new book on the subject by members of the Gesell Institute of Child Development, Frances L. Ilg and Louise Bates Ames, *School Readiness* (New York: Harper & Row, Publishers, 1965).

The most urgent of all curriculum undertakings for the future is the genuine individualization of learning experiences on the basis of all aspects of "readiness"—capacity, talents, maturation, motives, cultural conditions, stimulus factors, and the like. Except in rare instances such a school policy has never really been implemented in practice.

Transfer of Learning

Transfer of learning is a frazzled concept that has served as a convenient vehicle for supporting almost any position one wanted to take on educational matters. Much of the controversy is simply a semantic problem. Once the meaning of terms is agreed upon and concepts are clearly defined, much of the argument becomes senseless. The psychological construct applicable here is really one of generalization and discrimination, factors whose role in behavior is a matter on which scholars in the field largely agree.

If transfer of learning is said to take place when identical elements are present, we are not discussing transfer at all, but discrimination, in which responses learned in a stimulus situation are used again in a new situation in which the person identifies the presence of the stimulus. Cognition informs him that some element in the new situation is essentially the same element to which he responded in a certain way—that is, learned—in a previous situation. If transfer is to be defined as the process of making this discrimination, then transfer obviously occurs; but we think it more logical to recognize such behavior as simply the use of learned responses in situations in which the same stimulus pattern is perceived. For example, if a pupil has learned to make a line graph in mathematics to represent some relationships among data and on a later occasion makes a line graph in a modern problems class to show the increase in productivity per man-hour in agricultural production since 1947, transfer by some mystical process of legerdemain has not taken place—the pupil has discerned in a discriminating manner that the new stimulus situation calls for a response of presenting relationships among data, and his learned response is used as the basis for behavior. Of course, the basic factor in this response is the pupil's recognition of the fact that the stimulus situation has this common element. We prefer to postulate this as discrimination, resulting in the use of learned responses to a stimulus pattern.

The other factor to be considered in transfer is generalization. This is the crux of the matter. One of the basic responsibilities of the school is to foster and guide the process of building generalizations, for it is on the basis of generalizations that the human being can face with confidence new situations in his complex world. The process of generalizing is the essence of the education of human beings. Concepts, understandings, and principles guide us in resolving new situations and in determining courses of action in a world which forces on us a broad spectrum of stimulus situations, many of which are indeed ramified and complex patterns.

We perceive, we discriminate among stimulus factors, we organize the field, we make plans,[85] we respond on the basis of a tremendous syndrome of factors of several categories: habits, generalizations, attitudes, skills, knowledge, values, aspirations, motives, intent to learn, goal-sets, capabilities, needs, drives, competencies (if we have overlooked any determinants of behavior, they are unknown to us). If this complex utilization of previous products of learning is transfer, then let it be so; to us it makes little difference what we call it, just so we understand the nature of behavior and the methods for eliciting the behavior sought through school experience. For us, transfer of learning is largely a meaningless psychological construct; the development of behavior patterns is not.

The ability of a student to face a situation and cope with it satisfactorily depends in part on his mastery of the situation, on the extent to which he has dealt with similar situations in the past, and on his experience in "situation coping" in general, for certainly a pupil can be educated to deal with situations. Extensive, carefully guided practice with insight helps the pupil face situations with confidence and discrimination.

Generalization and discrimination can both be taught. A pupil who has had extensive guided experience in writing compositions and essays on a variety of subjects in an English class and whose teacher has generalized the principles of composition and of language usage is able to write a research paper for the class in modern problems, but a college freshman who graduated from a pseudoeducational institution in which he never wrote anything longer than one paragraph is virtually helpless when required to write an essay. He may have generalized some other past experiences, however, that cause him to turn to classmates for assistance or to read some books on essay writing.

Motivation is a factor in generalization and discrimination. The teacher of geometry who shows his pupils how the same principles of logic that were used in geometric proof may be used in analyzing newspaper editorials encourages such a generalized response when they read the daily paper. As most teachers know, intellectual ability, in the usual connotation of that term, is also a factor in the ability to discriminate and generalize.

Whether one chooses to call the application of knowledge to new situations transfer of learning or generalization and discrimination phenomena or to use both concepts, the curriculum planner should plan learning experiences of such scope and meaning that pupils will be able to behave in any future situation in a manner that best conforms to the behavioral goals and outcomes the adult society seeks as the objectives of school education.

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[85] Miller, Galanter, and Pribram, *op. cit.*

Goal Setting

In the discussion of motivation, attention was given to the goal-seeking nature of behavior. Here consideration will be given to the process of goal setting itself. Although goals originate in the needs of the organism, the nature and character of the goals set within the needs structure are learned. Needs in the broad, generic sense in which the term is used may be gratified in a variety of ways. What forms of gratification the person seeks will be the result of learning. Assume, for example, that a basic human need is love, affection, and a sense of belongingness. Perhaps an eighth-grade pupil seeks no more in school than a friendly greeting from the teacher or an opportunity to go on an errand for him. The individual sets his goals on the basis of the satisfyingness of past experience. He learns goal setting. He develops expectations.

An aspect of goal setting is aspirations. What is the level of performance sought? How does the individual expect to perform in an anticipated stimulus situation? Success and failure in response in comparable previous situations is a basic factor in determining aspirations. The teacher has an important function in determining goal levels. The child soon learns what kinds of performance in a given situation will be accepted as successful and acceptable.

Another important factor in goal setting and in expectations is the nature of the social group in which the behavior occurs, such as the school class. Many studies of the behavior of group members show the influence of the social group on the goals, levels of expectation, and aspirations of the individuals comprising the group.[86] In fact, the dynamics of group behavior is now an area for research and scholarly study. Obviously, capacities and talents, structuring past performance, have a great impact on goal setting. But one of the most important of all forces, a specific instance of the influence of the group, is the family. The climate for learning enveloping the child in school, as a contrived stimulus pattern, is also a determinant of goals, expectations, and aspirations. The complex nature of human behavior becomes more evident.

A MODEL OF BEHAVIOR AND LEARNING

A good method of summarizing a broad concept about some aspect of human affairs is to construct a model representing the basic elements in the matter under consideration and the interrelation of these factors.

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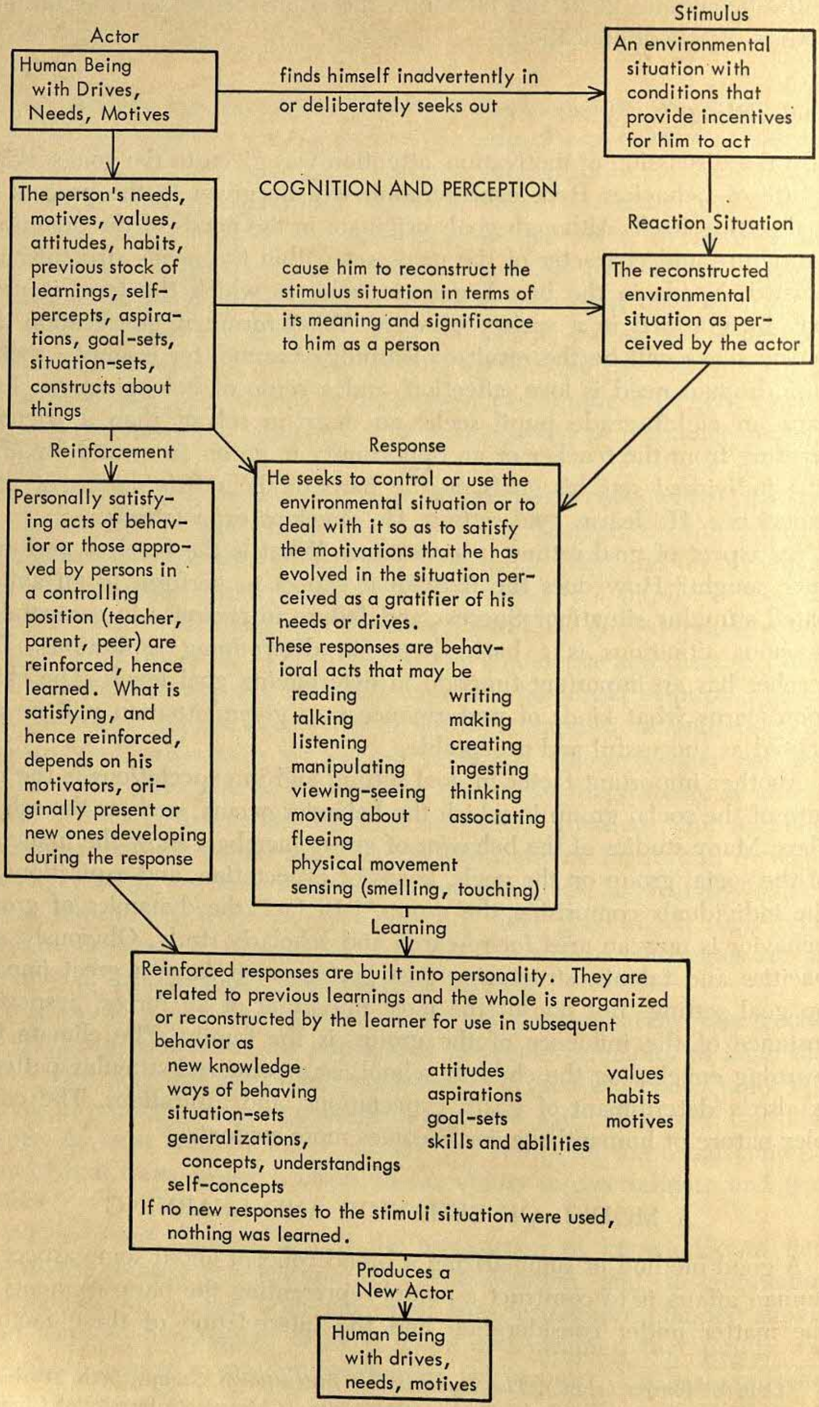
[86] Gale E. Jensen (chm.), *The Dynamics of Instructional Groups*, 59th Yearbook, Part II, National Society for the Study of Education (Chicago: University of Chicago Press, 1960).



Human Being with Drives, Needs, Motives

finds himself inadvertently in or deliberately seeks out

An environmental situation with conditions that provide incentives for him to act

The person's needs, motives, values, attitudes, habits, previous stock of learnings, self-percepts, aspirations, goal-sets, situation-sets, constructs about things

cause him to reconstruct the stimulus situation in terms of its meaning and significance to him as a person

The reconstructed environmental situation as perceived by the actor

Personally satisfying acts of behavior or those approved by persons in a controlling position (teacher, parent, peer) are reinforced, hence learned. What is satisfying, and hence reinforced, depends on his motivators, originally present or new ones developing during the response

He seeks to control or use the environmental situation or to deal with it so as to satisfy the motivations that he has evolved in the situation perceived as a gratifier of his needs or drives.

These responses are behavioral acts that may be

reading	writing
talking	making
listening	creating
manipulating	ingesting
viewing-seeing	thinking
moving about	associating
fleeing	
physical movement	
sensing (smelling, touching)	

Reinforced responses are built into personality. They are related to previous learnings and the whole is reorganized or reconstructed by the learner for use in subsequent behavior as

new knowledge	attitudes	values
ways of behaving	aspirations	habits
situation-sets	goal-sets	motives
generalizations,	skills and abilities	
concepts, understandings		
self-concepts		

If no new responses to the stimuli situation were used, nothing was learned.

Human being with drives, needs, motives

Figure 8: A Model of Behavior and Learning

It is very difficult to construct an accurate model of such a complex thing as human behavior. Nevertheless, in Figure 8 we present our efforts to depict a theory of behavior and learning. We hope it will be useful to curriculum workers in understanding the principal factors that guide behavior and determine learning.

PRINCIPLES OF LEARNING

To bring together more usably the presentation in this chapter and the large volume of research and theory about human behavior and learning, we have formulated the following list of principles as guides to curriculum planning and teaching. Although various "schools" of psychology differ in their interpretations of human behavior, and theories of learning provide different analyses of observed responses to situations, there is a large body of generalizations and concepts on which there is substantial agreement. The list that follows is an effort to state those principles which we believe provide a helpful basis for planning instruction and school programs.

Human Talents and Potentialities

1. Human beings have a tremendous variety of talents, capacities, and potentialities.
2. Individuals differ greatly in the amount and quality of a talent or capacity they possess, and in a large unselected population, a valid quantitative measure of a particular talent shows that the group distributes itself on a normal bell-shaped curve.
3. Although there is some correlation among the level of talents that call for the same or similar behavioral responses of an individual, which may be simply evidence of the same capacity being used in different response situations, the level and character of a talent cannot be accurately inferred or predicted from measures of another capacity. Thus specific measures of talent are needed for accurate determination of capacity.
4. What talents and capacities an individual chooses to develop most extensively at any given time depend on his motivations and drives in relation to the stimulus situation.

Readiness

5. Inasmuch as behavior is shaped by both the individual and the stimulus situation, the likelihood of a pupil's responding in a predetermined manner will depend on his capacities, motivations, and previous learnings and on the nature of the stimulus situation. Hence, readiness is not only an individual matter, but is dependent on the

nature of the situation to which the individual is expected to respond.

6. Great variation exists among pupils in their capacities, motivations, and abilities, in terms of previous learnings, to respond to stimulus situations.
7. Chronological age is only one—albeit an important one—factor in determining the response a pupil will make in a particular stimulus situation.
8. The nature of previous behavioral responses in a stimulus situation and the responses that have been reinforced will be important factors in determining readiness to respond in a predetermined manner in a similar situation in the future.

Behavior

9. Behavior is the resultant of two interacting factors: an organism and a stimulus situation. In analyzing or in directing behavior both factors must be considered.
10. The individual brings to any stimulus situation needs, drives, motives, self-concepts, aspirations, values, attitudes, capacities, talents, competencies, goal-sets, situation-sets, and a stock of learned responses from previous experiences in the form of knowledge, concepts, generalizations, skills, abilities, ways of behavior (expressed as personality traits), and enjoyments.
11. He selects out of the environmental situation those things that have meaning and significance to him in terms of his matrix of behavioral determinants and to which he will therefore respond.

Learning

12. A human being will learn as he attempts new responses that prove to be satisfying to him (reinforced): he learns by doing.
13. What an individual learns, therefore, are his responses to the stimulus factors in an environmental situation that are satisfying to him personally.
14. Practice is usually necessary to acquire a specific skill; practice, with insight and understanding of the behavior sought, is desirable in learning a fixed response or set of responses, but the learning of a complex human task may be facilitated by identifying component tasks of the final performance and then providing for the learning of each of these components.
15. To assure that learned responses will be readily available for use again in a situation with the same or similar stimulus conditions, they should be repeated soon thereafter, although forgetting is a complex matter, dependent on many factors.
16. Although learning must have an experiential base, some learning,

such as reorganization and restructure of behavioral patterns, conceptualization and generalization, and elimination of responses previously used, takes place without overt behavior.

17. The five essential bases for learning in a stimulus situation are motives, perception and cognition, goal setting, response, and reinforcement. Any one who wishes to control learning must control one or more of these factors in learning.
18. The successes and failures of a participant in a behavioral act will influence his motives, perceptions, and goal setting in similar stimulus situations in the future.
19. Responses which have been reinforced in some manner—satisfaction of a need, achievement of an incentive, self-satisfaction of achieving, cognitive feedback—will be more likely to be learned.

Transfer of Learning

20. A person who responds to specific stimuli in a situation in the same way he has learned to respond in the past is not transferring something learned to a new situation; if he has organized some of his learnings into generalized guides to behavior—concepts, principles, ways of dealing with a situation—he probably will make use of these structures of behavior in a gross environmental situation in which he cognates a similarity of conditions.
21. If it were possible to confront a child of school age with a totally new environmental situation in which none of the stimuli had been faced in a meaningful manner before (an impossible condition), the individual would have to respond on the basis of instinctive behavior or trial-and-error behavior with an instinctive base.
22. The greater the stock of generalized concepts, principles, and modes of behavior a person has learned the more competent he is to deal with succeedingly more complex environmental situations or those with a greater ratio of new stimulus conditions.

Personal Determinants of Behavior

23. A human being has a hierarchy of wants, needs, and drives. These impel him to act, to seek out situations in which they may be gratified, or to resolve situations with which he must cope in such a way as to satisfy a need. He seeks out or searches for environmental situations that will gratify his needs or contrives or restructures existing situations so he obtains needs satisfaction.
24. A person's perception of an environmental situation is a personal matter; cognition is selective. They depend on the individual's motivational pattern—status of needs gratification, goal-set, situation-set, values, self-concepts, aspirations, talents, and competencies.

25. Previously learned responses to stimulus situations with comparable elements also influence perception and cognition.
26. Behavior in a given situation—and hence learning—is determined by these motivational forces. Another person who is part of the environmental factors may exercise some control over the behavior of an individual by helping him perceive a situation differently or by arranging the situation in such a way that his motives are changed. In contrived situations, such as school experiences, a teacher may arrange the situation so that motives are aroused.
27. The gratification of needs is influenced by learning.
28. Threats and punishments by another person change the learner's perception of the situation, and hence his motivational pattern. Whether responses in terms of these new motives will result in the desired learnings depend on what the new motives are.
29. Failure to cope with a situation, to attain needs satisfaction from it, or to achieve an incentive, is learned. Such learnings will influence an individual's future behavior just as any other learning in his repertory does.
30. Learned responses for needs gratification may, for many children, include acquisition of knowledge, solution of a problem situation, creation of something, demonstration of ability to do something, coping with a situation, particularly if it is difficult enough to be challenging but not so difficult as to make failure likely, acceptance of new forms of behavior, exploration of the nature of a thing or a concept, and attainment of a sense of achievement.
31. Behavioral responses sought by another person will be more likely to occur if the learner has formulated motives on his own initiative that result in the desired behavior than if he has been forced by threats or other incentives to form motives, which then may or may not be conducive to the desired behavior.
32. Responses that are unique and original are more likely to occur if the child has learned from past experience that he can respond in divergent ways with satisfaction. If by withholding needs gratification a teacher forces him to conform consistently to prescribed types of response patterns in school, he has learned to guess how the teacher wants him to respond; he behaves accordingly—responding as demanded and not creatively.
33. A person's self-concept and his resultant aspirations are important factors in his perception of an environmental situation.
34. Repeated failure to gratify needs and attain incentives in a situation results in learned responses called frustration and anxiety, and these become behaviors used in similar situations in the future.
35. Pupils can learn to use the methods designated as logical thinking in coping with an environmental situation. Gratification or reinforcement comes from mastery of a challenging situation.

36. Values, attitudes, and modes of behavior in specific situations conform to cultural patterns, since the social group rewards (reinforces) only those types of responses that meet its approval. Hence, those values are learned that persons in the society who are model-persons for an individual approve, and these determinants then shape behavioral responses. However, in those types of behavior in which pluralism is permitted or encouraged, conflicts among person-images may result.
37. Realistic goal setting may be learned.
38. A pupil may readily respond satisfactorily to a difficult situation without reliance on behaviors of a frustrating or anxiety-producing nature if he has had ample opportunities in the past to deal successfully with complex situations.

In summary, learning results from behavioral responses to environmental situations. The two factors in learning, therefore, are an individual who acts, and an environmental situation to which he responds. The learner responds to the environmental situation as he perceives it, not as another person (a teacher or other curriculum worker, for example) perceives it. The other person may contrive a situation, such as those in the classroom, in such a way and provide cues of various sorts that the learner does perceive the situation much as the teacher would like to have him perceive it. His perception of the stimulus situation and his subsequent behavior in the situation is shaped by these factors:

1. His inherited capacities, talents, capabilities, potentialities, and motor skills
2. His stock of previous learnings and the organization and structure he has developed of these learnings in terms of knowledge, concepts, generalizations, and modes of behaving
3. His attitudes, values, and wants
4. His needs
5. His skills, abilities, and competencies
6. His concepts of himself as a person and his aspirations
7. His goal-sets and situation-sets
8. His drives
9. The incentives he sees in the situation

With all the variables possible in an environmental situation and the scope and range of variables in human personality, the complexity of controlling or determining learning is evident. The permutations are indeed immense. The manner in which the learning environment is contrived by the teacher or other curriculum planner, the whole climate for education fostered by the school, which will have important bearing on the goal-set of each pupil, the kinds of perceptions the school has developed in each child of its potentialities as an agency that will or will not gratify his needs and serve his drive are all conditions that influence the types of behavioral responses the pupil will make. And his own farflung and highly variable patterns of motivational forces constitute the second dimension. The challenge to the curriculum worker is to bring these two basic factors into such a harmonious relationship that significant learning results from school experiences. The psychologists have given the curriculum worker much help, but a great deal of penetrating research is still needed on the conditions for effective teaching.

THE TEACHING-LEARNING PROCESS

Teaching is a process of providing stimulus situations for learners and of eliciting the behavioral responses sought as objectives by the teacher who contrived the learning situation. The teacher has four fundamental responsibilities in the teaching process: the planning of environmental situations which will most likely elicit the kinds of behavior sought; the arousal in the pupils of motives to engage in the behavioral responses desired; the control and direction of the behavior of the pupils so that the responses sought are actually made; and provisions for reinforcement of desired responses. The significant thing to note is that the teacher is endeavoring to have pupils make certain behavioral responses and, by reinforcement of some appropriate kind, is striving to have these responses, if made, built into personality as learned behavior, available to be used again in another stimulus situation. Contrariwise he seeks to inhibit the acquisition of unwanted responses. The crux of the whole act of teaching is the effort to determine the kinds of responses that are made in all the experiences in which pupils engage under the direction of the school, that is, what has been learned?

Except for some types of restructuring and organizing and of extinction, all learning is a response; it must occur as the result of behavior, of experience. The curriculum is simply the sum total of these experiences. Planning the curriculum, therefore, is planning the kinds of experiences in which the school expects the pupils to engage under its auspices. The effectiveness of the planning will be determined, then, by the kinds of responses pupils actually make.

The arousal of appropriate motives in learners so they will make the desired behavioral responses is, as all teachers well know, a difficult task. Here teachers will need a thorough knowledge of human needs and drives. Maslow's list, White's notion of a competence drive, and other concepts discussed earlier, are helpful, but we still must develop more specific manifestations of needs and motives to be helpful to the teacher. A physiological need, for example, may be a rhythm of rest and activity, which would be important to teachers, particularly in elementary school. Maslow's delineation of a need to know and to understand seems to most teachers to have validity, particularly when bracketed with the need for self-actualization. Most pupils are curious, they want to know, to understand, to learn; they are challenged by problem-solving situations which are just difficult enough to require considerable thought and use of organized knowledge, yet possible for them to solve. They want to examine, to explore, to probe, to cope with a situation that interests them. They like to create, to make things, to excel, to win esteem, to be recognized as a worthy person, to be respected. These are motivational forces of great importance for a teacher as he seeks to elicit responses to the stimulation he has supplied in the classroom.

However, if behavior in the past under somewhat similar school situations has not yielded gratification of the needs, if a pupil has met failure, has suffered frustration, if the opposite kinds of responses from those desired by the teacher have been reinforced, school situations will not be likely to arouse motives of the types described. A child is not motivated to solve a challenging problem if his responses in the past have been discomforting and nongratifying. He has learned a response of avoiding such stimuli in a situation. To arouse a motive to know, to learn, the pupil must have had pleasurable results from efforts to satisfy such incentives in the past.

Many pupils who have gratified needs in past years in school by writing good papers, essays, and compositions for teachers will spend long hours in homework on a research paper for senior English, for they know that their need for self-esteem and for self-actualization can in part be met by submitting an excellent paper to the teacher. He may praise it, he may display it, he may give the pupil a top mark in the course, and in turn father and mother will praise the child, will talk about college plans, will encourage the pupil to apply for a scholarship, and the like. But a pupil whose compositions in elementary school have never received a good mark, whose efforts have been belittled, who has suffered needs deprivation because of his compositions, is frustrated more than ever by the assignment of a research paper in senior English. He hates school, he hates English, he daydreams about the day when he will be a famous sports figure or a great inventor, or a movie star and hence will win acclaim far exceeding that accorded to the writers of the excellent papers. It is not assumed that every student will be able to write an excellent research paper in senior English; but it is suggested that little learning will result in senior English by assigning such a task to a pupil who has never been successful in similar tasks in his previous school experiences.

The third responsibility of the teacher is the guidance of behavior so that the desired behavioral responses will be made. Here the teacher makes use of the many procedures and devices described so extensively in books on methods of teaching. Psychologically, we are concerned here with recall, transfer, reinforcement, extinction, rewards and punishment, spacing, frequency of practice or use, attention span, and similar matters treated in the textbooks on educational psychology. Various devices for eliciting response, such as teaching machines, visual presentations, and the like, are used by teachers in guiding classroom experience. The usual types of experience in a classroom include talking, viewing, listening, creating, demonstrating, making, solving, writing, performing, singing, drawing, exercising, playing, and portraying by facial expression and bodily gestures.[87]

The teacher is himself one of the most important stimulus sources in the environmental situation. What he says, whom he speaks to, what facial expressions, tone of voice, and bodily gestures are used, what he does, what he rewards, what he disapproves are, of course, major factors in determining behavioral responses of pupils. In fact, his own conduct is one of his chief methods of guiding behavior.[88]

An important aspect of the teaching-learning process is the evaluation of the results of behavior. It is the determination of what has been learned. The teacher's concern is the extent to which the desired behavioral responses originally sought, or as modified during the course of development of the experience, have been learned. He will ascertain this by determining the extent to which these responses are used in comparable stimulus situations in the future. He may create a new situation in which the responses are appropriate, such as giving a test in which the knowledge or generalizations are used; the learner may be asked to repeat an act he witnessed, such as demonstrating magnetic action; he may produce something that requires use of the responses learned previously, such as writing an essay; physical activity may be observed, such as an attempt to shoot a goal in basketball; speech may be analyzed to determine values, attitudes, and concepts. Possibilities for evaluation are as extensive as the learning experience itself, for it is these responses that are to be measured.

Psychology has much to contribute to the curriculum worker's understanding of the processes of teaching conducive to concept formation, generalization, problem solving, critical thinking, the development of attitudes, the acquisition of skills, the building of self-concepts, the setting of aspirations, the acquisition of knowledge, the formation of values, and the development of creativity. These topics are beyond the scope of this book; nevertheless, it is important subject matter for the educator to study.

FOR FURTHER STUDY

BALLER, WARREN R., AND DON C. CHARLES. *The Psychology of Human Growth and Development.* New York: Holt, Rinehart and Winston, Inc., 1961.

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[87] See especially B. Othanel Smith and Milton O. Meux, *A Study of the Logic of Teaching* (Urbana: Bureau of Educational Research, University of Illinois, 1963); and Arno Bellack and others, *The Language of the Classroom* (New York: Institute of Psychological Research, Teachers College, Columbia University, 1963).

[88] Sears and Sherman, *op. cit.*

Considers the teacher's need for a knowledge of psychology, the biosocial foundations of behavior, development and adjustment, and the school's role in personality development.

BERELSON, BERNARD, AND GARY A. STEINER. *Human Behavior: An Inventory of Scientific Findings*. New York: Harcourt, Brace & World, Inc., 1964.

Chapter 4 of this extensive analysis of research covers perception; Chapter 5, learning and thinking; and Chapter 6, motivation. These are the best summaries of existing knowledge.

COMBS, ARTHUR W., CHR. *Perceiving, Behaving, Becoming: A New Focus for Education*. 1962 Yearbook, Association for Supervision and Curriculum Development. Washington, D.C.: The Association, 1962.

Maslow brilliantly develops his concept of self-actualization, and Rogers and Combs contribute excellent statements of the development of personality. Application of these concepts is then made by the Yearbook Commission to curriculum practice.

FLAVELL, JOHN H. *The Developmental Psychology of Jean Piaget*. Princeton, N.J.: D. Van Nostrand Company, Inc., 1963.

Piaget's concepts of human development, particularly with reference to logical thinking and concept formation are very important for teachers. Flavell has made an excellent interpretation of his works.

FRIEDLANDER, BERNARD Z. "A Psychologist's Second Thoughts on Concepts, Curiosity, and Discovery in Teaching and Learning," *Harvard Educational Review*, 35: 18–38 (Winter, 1965).

A thoughtful and thought-provoking article on topics of great significance in recent curriculum development projects. The author raises important questions about some of the teaching methods recommended in these programs.

GAGNÉ, ROBERT M. *The Conditions of Learning*. New York: Holt, Rinehart and Winston, Inc., 1965.

A significant and very useful book for teachers. His views on learning, and the identification and discussion of types of learning is most helpful, as is his application of these principles and concepts to planning and teaching.

HARPER, ROBERT J. C., CHARLES C. ANDERSON, CLIFFORD M. CHRISTENSEN, AND STEVEN M. HUNKA. *The Cognitive Processes*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964.

Selected excerpts from the writings of more than fifty psychologists on cognitive processes. Inasmuch as these processes are central to the entire educational effort, the book has great significance for curriculum planners.

HARRIS, CHESTER W., ED. *Encyclopedia of Educational Research*. 3rd ed. Articles by William K. Estes, "Learning," pp. 752–770; Melvin H. Marx, "Motivation," pp. 888–901; and J. M. Stephens, "Transfer of Learning," pp. 1535–1543. New York: The Macmillan Company, 1960.

Concise and excellent summaries of research on aspects of learning theory.

HARRIS, THEODORE L., AND WILSON E. SCHWAHN, EDS. *Selected Readings on the Learning Process*. New York: Oxford University Press, 1961.

This book of readings has many selections of superior merit on topics discussed in this chapter.

HILGARD, ERNEST R., ED. *Theories of Learning and Instruction*. 63rd Yearbook, Part I, National Society for the Study of Education. Chicago: University of Chicago Press, 1964.

An outstanding collection of essays on learning and on the application of these findings and theories to selected aspects of educational practice.

ILG, FRANCES L., AND LOUISE BATES AMES. *School Readiness.* New York: Harper & Row, Publishers, Inc., 1965.

An extensive study of grade placement of elementary school pupils on the basis of readiness to undertake the work of the grade. The authors advocate a number of bases for assignment to grade level.

MELTON, ARTHUR W., ED. *Categories of Human Learning.* New York: Academic Press, Inc., 1964.

A very useful guide to the learning process. It summarizes a great deal of research and concepts on learning.

ROSENBLITH, JUDY F., AND WESLEY ALLINSMITH, EDS. *The Causes of Behavior: Readings in Child Development and Educational Psychology.* Boston: Allyn and Bacon, Inc., 1962.

An extensive and excellent collection of readings on many subjects of interest to readers of this chapter.

SEARS, PAULINE S., AND VIVIAN S. SHERMAN. *In Pursuit of Self-Esteem.* San Francisco: Wadsworth Publishing Company, 1964.

The authors made extensive case studies of eight elementary school children to gain an understanding of how children's feelings of self-esteem develop in the school setting. Important source material for those responsible for planning teaching strategies.

STEPHENS, JOHN M. *The Psychology of Classroom Learning.* New York: Holt, Rinehart & Winston, Inc., 1965.

A readable book that not only discusses learning, motivation, character and personal development, and adjustment in a most interesting and comprehensive manner, but considers the role of the teacher in utilizing these principles and concepts in the process of education.

CHAPTER 7

The Marks of a Good Curriculum

In this chapter we conclude our presentation of the bases for curriculum planning. In Chapters 4, 5, and 6 we have given attention to the functions and aims of the schools, the nature and organization of knowledge, and the process of learning, respectively, as such bases. Now we add to these bases, and also tend to summarize all of them, by turning attention to curriculum evaluation. Thus in Chapter 7 we deal with the development and use of criteria for evaluating a curriculum, and present our own notions of acceptable criteria, that is, the marks of a good curriculum.

USING CRITERIA IN CURRICULUM EVALUATION AND PLANNING

To evaluate is to determine the value or worth of something, and worth is expressed in relation to some type of criterion. The worth of the curriculum cannot be expressed as easily as that of services and goods valued by the criterion of dollars, although such a quantitative expression is attempted when standardized test results, for example, constitute the criterion. However, many types of criteria are used in evaluating the school curriculum. For our purpose of reviewing these types, classification by their sources is useful: (1) aims and objectives as criteria; (2) achievement standards as criteria; (3) criteria developed by external authority; (4) criteria developed by the planning group.

Aims and Objectives as Criteria

Probably the single most widely used statement of criteria is the *Evaluative Criteria*, originally developed by the Cooperative Study of Secondary School Standards, representing the regional accrediting associations. This guide for secondary school evaluation, first published in 1940, with 1950 and 1960 revisions, has been widely used by secondary schools throughout the United States as a basis for self-study and accreditation. The stated approach to school evaluation in this program is that of the use of the school's own philosophy and objectives as criteria:

> The Study has developed a proved way of recognizing that schools which are quite different may be equally good. This involves the basic principle that a school should be evaluated in terms of what it is striving

> to accomplish (its philosophy and objectives) and in terms of the extent to which it is meeting the needs of the students who are enrolled or for whom it is responsible. . . .
>
> The evaluations resulting from the use of materials and procedures suggested by the National Study of Secondary School Evaluation may be considered as ratios of accomplishment where the quality and nature of work done in a school are related to what should be done in order to satisfy the philosophy and objectives of the school and the needs of the youth who are or should be served by the school. This does not make the evaluation of secondary schools a simple task; but, at least, it establishes a sound basis for such an evaluation.[1]

The first task of a school faculty using the *Evaluative Criteria* in school evaluation is to prepare a statement of its philosophy and objectives. In its later review of the school program and supporting facilities and services, the faculty rates each aspect on the basis of checklists in the volume, but is instructed to modify these checklists and other evaluation items to make them consistent with the characteristics of the school and community and with the stated philosophy and functions of the school.

Although in practice the use of the *Evaluative Criteria* may give less attention to the particular school's aims and objectives than is intended in this evaluation pattern, the volume itself certainly emphasizes the aims and objectives approach to evaluation. This approach is also widely used in evaluative efforts somewhat differently organized and conducted. Thus many types of evaluations are based more or less systematically on analysis of the "jobs" to be done by the schools, with periodic review of evidence as to how well the job is being done. A study formally organized on this basis is described in Chapter 12; examination of the jobs listed in this school system indicates that they might also have been stated as "goals" or "aims."

In planning situations where evaluative criteria are never systematically stated, an aims and objectives approach may also be implied since the evidence reviewed and the judgments stated almost invariably relate to one or more generally accepted aims, such as achievement in basic subjects, preparation for college, and preparation for work. The weaknesses of these evaluations generally lie in their attention to a rather limited group of aims.

The foregoing criticism of the use of certain objectives as criteria for appraising the school curriculum is not intended to disparage at all the fundamental relationship of aims and criteria. We regard the aims of the school as a paramount basis for curriculum planning (see Chapter 4) and believe any comprehensive evaluation of the school program must begin with its objectives. Thus we accept as wholly sound the basic principle that "evaluation should be based on stated objectives." This principle is placed first in the list of "Criteria of Excellence" in the 1959 statement on school evaluation by the American Association of School Administrators and the National School Boards Association and supported in part by this paragraph:

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[1] National Study of Secondary School Evaluation, *Evaluative Criteria, 1960 Edition* (Washington, D.C.: The Study, 1960), pp. 3–4.

> Intelligent evaluation can take place, however, when broad aims and specific objectives have been generally agreed upon and when the complex and varied tasks of the schools have been identified. Without agreement of broad purposes, common values, and the need for diversity, attempts to evaluate schools will inevitably lead to dispute and frustration. It is as futile to check the accomplishments of the schools against purposes that have not been previously established as it would be to expect a man to return from a place where he had not been.[2]

Our point is that it is not intelligent evaluation of the curriculum to base judgments on only one such criterion as success in college admission and standing if the school has aims and objectives other than preparation for college. In fact, it is not intelligent evaluation to appraise a school's program until criteria have been deliberately formulated with reference to all the stated aims of the school. Although the two formulations may be very similar, and certainly the criteria should encompass the aims, the criteria usually need to be stated in such terms as to permit specific judgments as to whether the aims are accomplished.

Achievement Standards as Criteria

We noted in Chapter 1 (see pages 9–10) the proposal that national standards in education be maintained by the use of a national testing program. We also noted that such a use is already approached, however, in the widespread comparison of local achievement with national norms. The study of approaches to school system evaluation reported in the *Quest for Quality* series found that every school visited during the project had "a reasonably comprehensive program of standardized testing" and that the most frequently stated purposes included "*to provide an overall view of the program, spot weaknesses, improve teaching, identify needed curriculum revision, provide comparison with previous years,* identify remedial cases, develop new instruments of testing and provide information needed for grouping students."[3]

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[2] American Association of School Administrators and National School Boards Association, *Judging Schools with Wisdom* (Washington, D.C.: National Education Association, 1959), p. 2.

[3] Lewis E. Harris and Clyde B. Moore, *Keys to Quality, Quest for Quality,* No. 14 (Evanston, Ill.: National School Boards Association, 1960), p. 22. Italics supplied.

Undoubtedly school systems do make great use of test results, as indicated by the italicized portions of the above quotation, in curriculum evaluation and revision. In fact, the Joint Committee on Testing established by the American Association of School Administrators, Council of Chief State School Officers, and the National Association of Secondary-School Principals reported in 1962 that nearly one half of the administrators responding to the committee's survey stated that they use test results to aid in curriculum change and evaluation. The committee made this comment:

> Testmakers must exercise the greatest wisdom and infinite care in formulating national examinations and they should be sensitive to the fact that national examinations often lead to the establishment of priorities of knowledge and predetermine areas of the curriculum held to be of most worth.[4]

Certainly standardized tests can and do yield data of great significance in curriculum evaluation, and we include them later in this chapter as one of several major sources of evidence in applying criteria to the curriculum of a school. Our reservations about the use of test results have several bases: standardized test data are virtually the only evidence used in curriculum evaluation; national test norms are not in themselves criteria of the individual school's curriculum but simply constitute a point of comparison that should be made in the light of many other facts; many aims and objectives other than achievement standards in subject fields are generally sought by good schools; standardized tests are not generally used in all curriculum areas, and thus, as suggested in the committee's statement, place priorities which may not be appropriate for a particular school. These reservations about using only standardized test results to judge schools are supported by a 1963 publication of the president and the project director of the Educational Testing Service:

> Too many people, particularly those who are critical of a school or system, or who for some reason wish to denounce public education, seek to prove that one school has a lower average score—or a higher one—than some other school on "a standardized school achievement test." Standardized tests cannot be used alone to judge schools, for even a whole battery of them will not measure all kinds of learning students achieve. The effectiveness of a school or school system depends upon so many things . . . that average student performance on standardized tests usually

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[4] Joint Committee on Testing (David B. Austin, chm.), *Testing, Testing, Testing* (Washington, D.C.: American Association of School Administrators, Council of Chief State School Officers, National Association of Secondary-School Principals, 1962), p. 22. For a much more highly critical treatment of tests see Hillel Black, *They Shall Not Pass* (New York: William Morrow & Company, Inc., 1963).

> reflects the nature of the community as well as the nature of the school, and in unknown proportions.[5]

As we see it, reliance in curriculum evaluation on evidence as to the standing of high school graduates on college entrance and scholarship examinations involves about the same fallacies as those just implied. That is, one cannot say that a high school's curriculum is good merely because a relatively high proportion of its graduates are admitted to college or win Merit Scholarships. This is one type of evidence, and one of importance, but the evaluating group also needs information about how school aims other than success in college admission are achieved. We again emphasize this point because of the extensive preoccupation of many curriculum developments in the early 1960's with this one criterion. As the committee pointed out, "Testing programs of critical importance—such as those which provide a basis for selecting scholarship winners—may not only curtail curriculum change; they are in a good position to control curriculum altogether."[6]

Achievement standards which can be tested by presently available standardized tests simply do not constitute adequate criteria of a curriculum for excellence in education. Certainly standards set in terms of the number of correct responses to factual questions are not compatible with the kind of standards needed to judge the education of the self-renewing person as described in John Gardner's challenging treatment: *Self-Renewal: The Individual and the Innovative Society*. We believe that a curriculum evaluated only by achievement standards of the usual type would instead maintain the type of education he describes as "monumentally ineffective":

> All too often we are giving our young people cut flowers when we should be teaching them to grow their own plants. We are stuffing their heads with the products of earlier innovation rather than teaching them to innovate. We think of the mind as a storehouse to be filled when we should be thinking of it as an instrument to be used.[7]

Comprehensive, Externally Developed Criteria

Statements of aims and objectives that have been adopted from some source outside the planning group and that are used for curriculum evaluation are in themselves externally developed criteria. We have in mind, however, the frequent use by some planning and/or evaluation group of a comprehensive statement of curriculum criteria developed by some national, regional, or state group. Such statements may also use an aims and objectives approach, too; for example, the *Evaluative Criteria,* although specifying that the local school should base its evaluation on its own statement of philosophy and objectives, clearly states in the form of guiding principles and checklists more specific criteria, which may or not be modified by the local faculty.

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[5] Henry Chauncey and John E. Dobbin, *Testing: Its Place in Education Today* (New York: Harper & Row, Publishers, Inc., 1963), pp. 67–68.

[6] Joint Committee on Testing, *op. cit.*, pp. 24–25.

[7] John W. Gardner, *Self-Renewal: The Individual and the Innovative Society* (New York: Harper & Row, Publishers, Inc., 1963), pp. 22–23.

In the late 1950's and thereafter many comprehensive statements of criteria, generally in checklist form, were generated by the widespread post-Sputnik interest in the quality of the school program. In the spring of 1958 the National Education Association brought together a seminar on evaluation which produced a thirty-two page checklist, *How Good Are Your Schools?* Also in 1958 the National Congress of Parents and Teachers published its guide entitled *Looking in on Your School.* In 1959 the National Citizens Council for Better Schools published its *Yardsticks for Public Schools,* including an 80-statement "Self-Quiz of School Quality." We have already noted the 1959 statement by the American Association of School Administrators and the National School Boards Association entitled *Judging Schools with Wisdom.* These organizations also collaborated in a series of fourteen publications in 1960, entitled *Quest for Quality,* which reported case studies of actual procedures of evaluation in local school systems. These pamphlets provide useful information as to the actual evaluation processes in various types of American school systems. In addition, various other professional associations and state departments of education have issued such statements. Thus a 1963 bibliography prepared by the United States Office of Education listed 137 selected references on evaluating elementary schools, including 51 citations of materials produced by professional organizations and state departments of education "to help educators evaluate the schools."[8]

Reports and recommendations of national, regional, and state groups and even of individuals may also be treated as criteria and used to evaluate the school. Thus the reports of the National Association of Secondary-School Principals' Commission on Staff Utilization[9] have been widely studied by secondary school faculties and other groups as points of departure in appraising and modifying local school practices with particular respect to the so-called Trump Plan provisions for large- and small-group instruction and independent study (see Chapter 10). We know of no recommendations which elicited more widespread evaluative efforts than the reports of James Bryant Conant on his study of the American high school.[10] Many school systems, individual schools, and even state systems prepared reports to show how their schools measured up to Conant's twenty-one recommendations regarding the high school and his fourteen regarding the junior high school. At about the same time the Association for Supervision and Curriculum Development, National Education Association, published its pamphlets on *The High School We Need* and *The Junior High School We Need*. A 1963 conference organized by the Department of Elementary-Kindergarten-Nursery Education of the National Education Association resulted in a four-page statement of "Agreements in Elementary Education," including a list of criteria useful in local self-study. The four-volume report in 1963 of the National Education Association's Project on Instruction featured thirty-three recommendations, many of which are applicable in local self-study programs.[11]

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[8] Gertrude M. Lewis and Esther Murow, *Evaluating Elementary Schools* (Selected References No. 35; Washington, D.C.: Division of Elementary and Secondary Education, Instructional Programs Branch, United States Office of Education, July, 1963).

[9] See J. Lloyd Trump and Dorsey Baynham, *Focus on Change: Guide to Better Schools* (Chicago: Rand McNally & Company, 1961), and other publications listed therein.

Local school faculties use such checklists of criteria and statements of recommendations in several ways as they attempt to determine the goodness of their own school programs. First and most wisely, we believe, they use the externally prepared statements as sources from which to formulate their own statements. Second, and perhaps more frequently, they use as it is whichever statement they select to evaluate their own program. This use may vary from a very comprehehsive program of evaluation, involving the collection of evidence on each criterion so far as possible, to a discussion session or two in which faculty members simply share their opinions as to how well the school meets each criterion. Third, the school may organize study programs based on all or selected criteria or recommendations and involving parents and others in the determination of points of strength and weakness in the school. Such programs may eventuate, of course, from either of the other two types of use of the criteria.

We ourselves have found the externally developed criteria very useful in working with school faculties and other groups to evaluate the school curriculum. In general, the most effective use seems to be as sources for study in connection with the development of criteria which fit the local situation. However, one needs to avoid in this case the rationalization that any criterion which is not well met by the school "does not really apply."

Locally Developed Criteria

Extensive use of locally developed criteria for curriculum evaluation is perhaps best illustrated by the elementary school improvement program of the Southern Association of Colleges and Schools, formerly the Southern Association of Colleges and Secondary Schools. Uniquely among the regional accrediting associations, this one has had a definite program for improving and recognizing elementary schools since 1946. Affiliation of elementary schools was made possible in 1953, and accreditation in 1958. From the beginning of this program, emphasis has been on the self-study and improvement of the school; these are the first three of the "Beliefs Underlying the Cooperative Program in Elementary Education":

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[10] James B. Conant, *The American High School Today* (New York: McGraw-Hill Book Company, Inc., 1959), and *Education in the Junior High School Years* (Princeton, N.J.: Educational Testing Service, 1960).

[11] See Project on the Instructional Program of the Public Schools, *Schools for the Sixties* (New York: McGraw-Hill Book Company, Inc., 1963), pp. 123–135, for the entire list of recommendations.

> 1. The improvement of elementary schools can be fostered best by stimulating and assisting schools to undertake or continue local programs of improvement characterized by careful selection of the problems to be studied and respect for evidence in evaluating the results of study and action.
> 2. Programs of school improvement should be centered upon problems identified through local study.
> 3. Cooperative self-evaluations, based on the use of a systematic guide or procedure, are the best means of identifying areas of the school program in need of improvement and of unifying the forces of the school and the larger community.[12]

Several publications, including *Evaluating the Elementary School: A Guide for Cooperative Study,* are made available to the schools by the Association, but these are basically study materials rather than statements of evaluation. The recommended procedure of the self-study program of the school is briefly described as follows in the guide:

> A faculty, under the leadership of the principal, faced with the necessity of getting the self-study started and making participation interesting and challenging, may proceed successfully in many different ways. One procedure, however, is being recommended here because it moves the study forward quickly, with each member of the faculty contributing on the basis of his background, and with authorities and research being used to help the group make sound decisions. That procedure includes a cycle of steps, as follows:
>
> I. What is desirable for this school or system?
>   A. The staff identifies its current beliefs about what is desirable.
>   B. The staff looks at the beliefs of others.
>   C. The staff refines its beliefs about what is desirable.
>
> II. What does the school or system have?
>   A. The staff describes the present status.
>   B. The staff compares the present situation with its refined beliefs about what is desirable.

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[12] Committee on Elementary Education, Southern Association of Colleges and Schools, *Guide to the Evaluation and Accreditation of Elementary Schools* (Atlanta: The Association, 1964), p. 1.

    1. The staff identifies the strengths of the school or system.
    2. The staff identifies areas where improvements are needed.
- III. What is being done to improve?
  - A. The staff identifies what is being done to improve.
  - B. The staff describes these current efforts to improve.
- IV. What additional plans should be made to improve?[13]

Many school faculties, both elementary, secondary, and system-wide, use their own statements of beliefs or criteria, usually developed with such reference to the statements of others as suggested in the foregoing material. However, this material, unlike the *Evaluative Criteria* for secondary schools, does not specify specific criteria and schemes for rating each aspect of the school program; instead, the cycle of steps quoted is to be taken for each phase.

In our judgment, the significance of the use of locally developed criteria lies in the better understanding of the curriculum and its evaluation which accrues through faculty study of possible criteria and final formulation of its own set. Development of such a set of criteria involves considerably more than simple checking of the vocabularies and mechanics of published statements; it should include efforts to apply the criteria studied to determine whether they really fit the situation, and also whether there are features of the program not covered by the existing criteria. For example, criteria designed for a graded school may not be as applicable to a nongraded one, or those for a departmentalized organization to a nondepartmentalized one.

Some Issues in Stating Criteria

Most issues in curriculum evaluation revolve around the central matter of the organization of the curriculum (see Chapter 8). Inevitably the criteria have to be applicable to the particular organizing centers or divisions of the curriculum. Since the curriculum is generally organized around the subjects, many sets of criteria are also so organized. But an evaluation of the curriculum subject by subject, however logical and relatively simple, may ignore the large number of learning experiences outside the subjects, such as those in all-school activities, special-interest projects, guidance, and other special services. Furthermore, significant educational goals are not achieved singly within one subject, so that the subject approach to evaluation invariably asks the same questions of several subject fields. Hence we prefer statements of criteria which can be applied to the entire curriculum as well as to each element.

Another familiar issue in organizing the evaluation is the relationship of different grade levels, and especially the elementary school and the secondary school organization. Thus most published criteria relate to one or the other. This plan even divides by grade levels the evaluation of growth and learning in particular subject fields that extend throughout both elementary and secondary grades. This splintered approach to evaluation ignores the basic principle that most educational goals are not achieved at any one level for all individuals. This is another reason for our preference for statements of criteria which are applicable to the entire program, both elementary and secondary, and also to any particular level so far as possible.

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[13] Committee on Elementary Education, Southern Association of Colleges and Schools, *Evaluating the Elementary School: A Guide for Cooperative Study* (Atlanta: The Association, 1964), p. 8.

Still another issue is the relationship of the ongoing curriculum and the innovative practices introduced from time to time. This problem is particularly acute in a period of change in school programs. Should the criteria apply to a program as it exists today or as it may become tomorrow? We do not believe it possible to have two sets of criteria, one for existing curricular and instructional practices, and another for those which are to be the result of change. Rather, we believe that the criteria must make possible the evaluation of the curriculum in process of change.

A frequent criticism of curriculum criteria relates to their presumed "theoretical" nature. The fact that a statement of criteria has to do with an ideal does not necessarily mean that it is impractical. The title of a guest editorial by George V. Leonard in the May, 1963, *NEA Journal* implied this: "It's Practical to Be Intellectual." In it Leonard pointed out that what is practical today was theoretical yesterday:

> But times change, and these days they change with startling and frightening speed. New challenges come like thunder; and we must, as Toynbee has shown us, make lightning-fast new responses or else see our culture disappear down the drainpipe of history. . . .
>
> For our nation to make these new responses, we shall need education of a higher order than ever before imagined, education that gives us not only data but the interrelation of data, a vision of the pattern by history, of the web of modern knowledge.[14]

Thus we would argue that the criteria of a good curriculum should look to the best curriculum that can be envisioned, not to the *status quo*.

Finally, there is the issue of whether the criteria should apply to the curriculum as it is provided, or as it is experienced by pupils. As we see it, the curriculum should be evaluated in the dimensions in which it exists. Two dimensions are clearly recognizable: the curriculum planned, and the curriculum had. The first dimension is that of the curriculum actually provided by the school in the form of opportunities for learners. The second dimension exists in the actual experiencing of pupils as they select from the available opportunities those within which they have reason to wish experience. The criteria which follow therefore reflect our conception of the marks of a good curriculum both as it is provided and as a faculty can judge its likelihood of being experienced by learners. We would expect evidence to be collected on each group of criteria.

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[14] George B. Leonard, "It's Practical to Be Intellectual," *NEA Journal*, 52:31 (May, 1963).

SOME MARKS OF A GOOD CURRICULUM

We turn now to our suggestions of curriculum criteria—the marks of a good curriculum. We recognize that these are "externally developed" criteria for any local group, and urge that they be referred to only as one source in carrying on curriculum evaluation, preferably in connection with the local development of criteria. Our criteria are summarized in checklist form in Table 6 at the conclusion of the following explanation of each criterion and its possible application.

Is the Curriculum Systematically Planned and Evaluated?

Any thorough evaluation of a school's program for learners should include review of the processes whereby the program is planned and evaluated, since these processes tend to determine whether or not continuing curriculum improvement will occur. A major reason for the obsolescent programs of many schools lies in their inadequate arrangements for continuing study and change of their program. We described in detail the process of curriculum planning in Chapter 1; in Part V we deal with specific procedures and organizations for planning. Because of the relevance of the process of planning and evaluation to the goodness of the curriculum, Table 5 presents a checklist for evaluating the process itself.

Do Curriculum Opportunities Adequately Reflect the Aims of the School?

An "adequate" curriculum is provided when sufficient opportunities are offered to achieve each of a comprehensive set of school aims. In some schools the aims themselves may not have been stated, or they may be shortsighted. And even when the statement of aims is comprehensive, the curriculum opportunities may be poorly related to the aims or may overlook some of them. Aims should dictate the scope of the curriculum; the evaluation of scope should therefore determine whether the curriculum areas provided suffice to reflect all school aims.

In Chapter 4 we reviewed various significant statements of educational aims and goals, and proposed our own categorization of behavioral

TABLE 5

A Checklist for Evaluating the Process of Curriculum Planning and Evaluation in an Individual School

CRITERIA	IS PRACTICE SATISFACTORY	
	Yes	No
A. *Organization*		
1. All groups concerned (community, pupils, and faculty) participate as appropriate in planning curriculum purposes and policies and in evaluating the program.		
2. The faculty planning group is ultimately responsible for implementing purposes and policies through plans for learning opportunities.		
3. Each specific job of curriculum planning performed by an individual or group for the school is assigned and reviewed by the total faculty planning group.		
4. Some competent individual is designated and functions as coordinator of curriculum planning and evaluation.		
5. Adequate facilities are provided: time, materials, people.		
B. *Steps*		
1. Curriculum plans are designed to accomplish goals agreed upon by the planning group, and to reflect evidence of the need for curriculum change.		
2. The framework of the curriculum is tentatively outlined and/or accepted by the faculty planning group as a basis for making more specific curriculum plans.		
3. Resource units and other materials are planned in sufficient number and breadth to assist the planning of individual teachers.		
4. The teacher's preparation of his own plans gives first consideration to total faculty agreements regarding areas of emphasis.		
5. The ultimate initiation and classroom development of plans involve the participation of learners.		
6. A comprehensive program of evaluation provides guidance in each of the foregoing steps.		
C. *Ways of Working*		
1. A systematic set of procedures for curriculum planning and evaluation is in operation.		
2. Changes in the procedures and in the curriculum are based on evidence as to the need for change.		
3. The potential contributions of each group and individual available to help are identified and utilized.		

	IS PRACTICE SATISFACTORY	
CRITERIA	Yes	No
4. Group planning activities are so conducted as to direct the creative abilities of all involved toward the goals sought.		
5. Group decisions are made on the basis of careful consideration of issues and alternatives.		
6. An atmosphere of cooperative planning and evaluation pervades all planning groups and the school as a whole.		

goals as those behaviors relating to the realization of self and to group relationships (see pages 140–141). Although curriculum opportunities to achieve such aims may be organized and classified differently by various groups, it seems of the utmost importance that such a relationship and classification be made. The aims presented in Chapter 4 suggest that the school curriculum should include learning opportunities which we would group in the following areas as a basis for discussion and modification by a particular curriculum planning group:

1. *Communications skills.* Opportunities in communications skills should be sufficient that by the end of his high school program each pupil should read understandingly and critically; write (probably type) legible, well-organized letters and reports; speak clearly and interestingly; listen attentively and with understanding; use good taste and critical judgment in reading and in the choice of radio and television programs; use and interpret mathematics and other symbolic terms correctly; and, for many, speak and understand a foreign language.

2. *Understandings of the world and of man.* Sufficient opportunities should be provided that each pupil will in the course of his elementary and secondary school years achieve such depth as possible for him in the basic disciplines. He will come to understand as fully as possible the scientific bases of natural life; geographical and time relationships; the characteristics of different cultures; the role of the sciences, the social sciences, and the humanities in human affairs; the principles and processes of democratic action; the skills of human relations; and the dignity of human personality.

3. *Tools of continued learning.* Sufficient opportunities should be provided in every phase of the curriculum for the pupil to learn how to learn and, further, to enjoy learning. These opportunities would stress the application of the methods of inquiry in basic disciplines such as mathematics, science, history, and economics. Pupils should have many and varied opportunities to learn to find information in reference books and other printed sources, from listening and viewing, and in personal interviews; to evaluate sources of information, to weigh conclusions before

stating them, to check opinions with other people, to evaluate their own actions and knowledge, to adjust readily to change, and to experiment with alternative courses of action.

4. *Activities of citizens and homemakers.* Throughout the period of schooling pupils should have adequate opportunities to become informed and skilled in such activities as considering civic issues, voting, observing laws and safety precautions (including those essential in driving automobiles); paying taxes, contributing to civic enterprises, and working as a member of a civic group; preparing and following personal budgets, conserving resources, being discriminating in purchases, investigating and evaluating wage and income possibilities; observing the courtesies essential in home life situations and carrying on their own share of home and family responsibilities.

5. *Mental and physical health.* Adequate opportunities should be provided in many curriculum areas for pupils to acquire values, knowledges, and skills which assure their mental and physical fitness and well-being. They need to learn to recognize the strengths and limitations of the human body; to practice correct habits of self-discipline, nutrition, rest, work, and play; to protect themselves against disease and accidents; to participate in a variety of wholesome individual and group recreational activities.

6. *Esthetic activities.* Especially for children and youth whose home and community backgrounds are deprived in the esthetic area, the school curriculum should provide a wealth of opportunities to develop the love and appreciation of beauty. The wholesome use of leisure time should be amply demonstrated by curriculum provisions for devoting leisure time to such activities as reading, nature study, art, music, and drama. Discriminating taste in the selection of entertainment can be developed through group activities in the esthetic area with adequate opportunity for the development of standards and their applications.

7. *Moral and ethical values.* Although the area of moral and ethical values is closely intertwined with others, its development cannot be left to chance in the school program. There must be many opportunities for children and youth to develop and apply standards of behavior in relation to their fellows. Carefully guided free and open discussion of human strengths, limitations, and relationships, along with consistently exemplary behavior by school personnel, are essential in this area. Concern for the individual, his rights and responsibilities, constant attention to what is right and what is wrong, and reference to a framework of spiritual values must permeate the curriculum.

8. *Specialized interests.* Opportunities must be provided at many levels and in many curriculum areas for learners to come to understand their abilities and limitations, the possibilities of particular careers, and the nature of preparatory programs and their appeal. Exploratory opportunities in many fields of human endeavor should precede any choices

of specialized courses and preparatory programs. Guidance services should be organized to uncover human potential and interest rather than to freeze them into curriculum tracks.

Does the Curriculum Maintain Balance among All Goals?

The criterion of a balanced curriculum runs through all other aspects of curriculum evaluation. Balance is perhaps threatened most by some notions that it can be best maintained by a uniform curriculum providing equivalent learning opportunities for all youngsters. Balance, too, has to be considered on a two-dimensional basis. In the first place, there must be balance in the program provided through adequate opportunities for each learner to achieve all major curriculum goals. The requirements and provisions need to be balanced so that one set of goals and provisions does not dominate the curriculum. At the same time, such resolution of the issue as some proposals of heavy requirements make creates an imbalance in the second dimension, namely, the learner's own program. In short, what is a balanced curriculum for one learner is not necessarily so for another.

Among the questions that need to be asked in evaluating the balance of the curriculum are these:

Does the curriculum provide for attention to each goal commensurate with its importance?

Does the guidance given each individual provide for him a program which is well balanced in terms of his needs and capacities?

Do the school plant and facilities permit appropriate attention to each goal?

Does the curriculum planning process assure careful consideration of special pressures so as to guard against domination of the curriculum by pressure interests?

In small schools is the program one in which all pupils can find profitable opportunities?

Are all-school activities and the so-called extracurricular activities, especially in the high school, managed so as to secure their values for all youth as appropriate without encroaching on the centrally important intellectual activities of the school?

Are schedules so arranged as to prevent exclusion of individual pupils from school activities because of their occurrence in out-of-school time?

Are classroom activities so organized that pupils may participate in group and individual activities according to their own needs and abilities?

Are learning experiences so planned as to provide a variety of pupil activity?

Are classroom schedules so arranged as to allow adequate time for both "doing" and "reflecting" activities?

Does the Curriculum Promote Continuity of Experiences?

A desirable continuity of learning experiences is provided for in several different ways. First of all, the total period of formal schooling must be so arranged as to prevent sharp breaks from one level to another. Thus, repetitive graduation exercises at the conclusion of elementary, junior high, and senior high school programs have gradually been eliminated or diminished in importance. Further, continuity is facilitated within each curriculum area by vertical curriculum planning for the subject fields. Third, perhaps the most important continuity comes through plans of individualized instruction to ensure a desirable sequence in the individual's own experiencing.

Some criteria which may be applied to secure evidence as to provisions for continuity follow:

Is there a curriculum planning organization which facilitates review and evaluation of the usual sequence of learning opportunities within each major subject field?

Are there provisions for the smooth transition of pupils from one grade or classroom to another and from one school to another?

Do classroom practices indicate concern for the maturity and learning pattern of each pupil?

Do teachers consult the interests, past experiences, and other leads from their study of learners in planning learning opportunities?

Do teachers of the same pupils, and their past and present teachers, exchange information regarding these pupils' experiences?

Do group experiences, such as audiovisual aids and excursions, when repeated, serve different purposes?

Is Flexibility in the Development of Learning Opportunities Encouraged and Utilized?

The very best curriculum plans on paper may be very poor in their classroom development if teachers follow them too closely. Thus a resource unit or syllabus followed literally may have all the disadvantages of the uniform textbook as a curriculum guide. As we explain more fully in Chapter 13, the effective teacher must have alternative plans or at least sufficient flexibility in his plans to utilize well the needs and interests of particular pupils in actual learning situations.

Probably the greatest hindrances to a good curriculum are the graded structure, especially of the elementary school, and the schedule, especially of the secondary school. The tradition that a pupil must complete the work of a grade in one school year, no less or no more, and all the practices which reflect this tradition tend to make the curriculum of many children either too demanding or too boring for them. Similarly, the practices arising from the period-per-day-per-subject for all secondary school pupils exercise the same restrictions on these pupils' curriculums. We describe in Chapter 10 some of the nongraded and flexible scheduling developments which are designed to break down these restrictions.

Relevant questions to be asked about a school's program include the following:

Can teachers arrange for longer periods of work with pupils when need is indicated?

Can individual pupils be scheduled for independent study even if they must miss regular class meetings?

Can teacher schedules be so arranged as to permit a teacher of one group to serve as a resource person for another?

Can classroom groups be brought together to share learning experiences?

Can pupils be transferred easily from one learning situation to another when desirable?

Are time allotments or other patterns of classroom activity regarded as purely suggestive and subject to modification according to the needs of each learning situation?

Are teachers encouraged by their colleagues, supervisors, and principals to be flexible in actual teaching situations?

Are Effective Learning Experiences and Needed Resources Employed?

Curriculum plans can break down in the clasroom if the teacher fails to arrange the learning situation effectively, especially in handling group organization and needed resources. We devote Chapters 13 and 14 of this book to problems of teachers' planning and use of learning resources. The following questions reflect some of the criteria indicated by our suggestions as to the actual implementation of curriculum plans for individual classrooms:

Are the experiences planned for each learning group related to the needs and capacities of its members?

Are learning experiences developed so that pupils see purpose, meaning, and significance in each activity?

Are needed and available resources in the school and community utilized by the teacher at the time they are relevant and helpful? Are they selected with attention to their accuracy and efficiency?

Are learning resources so handled as to encourage use of the right resource for the right pupil? Are reading materials available for a wide range of reading abilities and interests?

Are self-teaching aids so used as to permit teachers' concentration on activities which require teacher-pupil interaction? Is independent study carefully planned and aided?

Does the Curriculum Provide Adequately for Each Learner?

The problem of curriculum provisions for individual learners so permeates good curriculum planning that we consider this criterion of central significance. Indeed, our whole conception of curriculum planning is that its effectiveness is ultimately determined by the behavioral changes effected in individual learners. Thus we see all curriculum plans as being made with attention to the needs and capacities of pupils, and we also recognize the need for specific plans of differentiated learning opportunities for varying individuals (see Chapter 11). For purposes of total curriculum evaluation, certain principles of curriculum development and instruction with reference to individual differences seem of fundamental importance: educational diagnosis, self-direction and independent study, self-evaluation, and follow-up guidance services.

Does the curriculum provide for educational diagnosis? "Educational diagnosis" in a broad sense may include all the fact-gathering and other curriculum evaluation activities dealt with in this chapter. Our immediate emphasis, however, is in the more specific sense of diagnosis of the individual's own learning processes and problems.[15] Test data about the pupil's achievement status and his mental abilities are important, but insufficient for adequate planning for individual differences.

Evaluation of the school's arrangements for educational diagnosis involves examination of such guidance and teaching practices in the school as the following:

What provisions are made for teachers to learn as much as possible about pupils, especially regarding their home backgrounds, previous educational experience, intelligence and aptitudes, interests and ambitions, physical and emotional health, and basic learning skills?

Are specialized psychological services available to help in educational diagnosis?

In planning his learning experiences how do teachers utilize the information available about each pupil?

Are pupils who experience difficulty in carrying out the plans made for them identified and given special attention? Is there opportunity for each teacher to have some time alone with each of his pupils occasionally?

Is an experimental attitude maintained toward all individuals taught, with frequent identification of their reactions to learning experiences?

Are self-direction and independent study encouraged in the arrangement of learning opportunities? The principle of self-direction has perhaps received more emphasis in the reading program of the elementary school than have other phases of the school curriculum. Here it functions best as children are early encouraged to select materials to read which they are interested in and can come to understand. The same principle operates very widely under different names in many aspects of the school program as pupils are encouraged to solve problems, design their own productions in arts and crafts, select their own topics for essays in English classes, and plan their own projects in science, vocational, and other courses in the high school. As principles of learning are more fully utilized in the elementary and secondary school classroom, we are convinced that each pupil must be given much more opportunity for self-direction. We are satisfied that more frequent and consistent use of independent study arrangements would make the curriculum far more vital to many children and youth.

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[15] See Hilda Taba, *Curriculum Development: Theory and Practice* (New York: Harcourt, Brace & World, Inc., 1962), Chap. 15, for an extended treatment of this topic.

In his book on *High School Students Speak Out,* David Mallery cites the following comment by a high school boy who was answering a question about curriculum:

> Well, curriculum is curriculum. We have it for twelve years. We haven't mentioned it to you because we wanted to tell you first about the things that really matter.[16]

Mallery also cites the following incident relevant to the present criterion:

> ### THAT'S OURS—DON'T KILL IT BY PUTTING IT IN THE CURRICULUM!
>
> This warning was given by a girl in an all-academic public school. She and four students from regular and advanced sections were sitting with me in a corner of the empty school library. They had been talking eagerly about Camus's *The Plaque,* Dostoyevsky's *Notes from Underground* [*sic*], Swift's *Gulliver's Travels,* Freud's *Interpretation of Dreams,* and Fromm's *Escape from Freedom.* I asked if these were discussed in any particular course. They answered almost in chorus: "Oh no! That would kill them. *Everybody* doesn't have to be doing the same thing!"[17]

The point is that children and youth tell their parents and teachers in many different ways that "what matters" is what they themselves plan and do. Perhaps adults tend to postpone too long the development of self-directing activities wisely guided by good teachers. We submit the opinion that for the school to help the pupil become increasingly wise in his own choices is perhaps the central business of education. We believe this is the kind of education needed for the self-renewing individual Gardner seeks:

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[16] David Mallery, *High School Students Speak Out* (New York: Harper & Row, Publishers, Inc., 1962), p. 17.

[17] *Ibid.,* p. 40.

> Education at its best will develop the individual's inner resources to the point where he can learn (and will *want* to learn) on his own. It will equip him to cope with unforeseen challenges and to survive as a versatile individual in an unpredictable world. Individuals so educated will keep the society itself flexible, adaptive and innovative.[18]

Currently this point of view is being implemented in American education through a wide variety of plans of independent study. These plans have in common a focus on development of the individual's own powers of self-motivation and self-propulsion in his intellectual activity. As school faculties evaluate their efforts to engender and cultivate these traits such questions as the following may be relevant:

Are pupils at every level given opportunity to preview and select materials to be used in their study?

Do teachers and parents confer about the kinds of reading and other materials available at home and school?

Are such problems as underachievement, lack of interest, poor behavior, and irregular school attendance studied for clues as to the degree of independence pupils have in their selection of educational experiences?

Are learning activities arranged so as to provide adequate time for the individual to do some things on his own?

Is self-evaluation encouraged and aided? Traditional systems of education have little place in them for self-evaluation. Such systems of education are described by Harold H. Anderson as "closed":

> In education the CLOSED SYSTEM is concerned very little with originality or invention by the student. It is concerned mainly with acquiring a body of knowledge, memorizing of facts, finding answers to problems—all of which are already known to someone else.[19]

The contrasting "open system" is described by Anderson in these terms:

> The greatest opportunity for learning in the Open System, however, is found in infancy and the preschool years when there are few environmental demands, no curriculum, and little systematic teaching. It is at this period of no curriculum and little pressure that the greatest and most rapid learning takes place and that creativity is most universally manifest. The Open System permits originality, experimentation, initiative, and invention; it constitutes the propitious environment for creativity.[20]

In the "open system" of education, only the learner can evaluate his own work. He may be given counsel by the adult, the teacher, but it is the learner himself who has devised his experience and it is he who understands it well enough to make judgments about its satisfaction of his own interest and motives.

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[18] Gardner, *op. cit.*, p. 26.

[19] Harold H. Anderson, "Creativity and Education," *College and University Bulletin*, 13:1 (May 1, 1961).

[20] *Ibid.*

Self-evaluative devices are increasingly used in many elementary and secondary schools. Ranging from simple teacher-pupil conversations initiated by the teacher's question, "How are you doing?" to elaborate checklists, these devices place a premium on pupils' ability to define their own goals and evaluate their own progress in relation to these goals.

Full development of the principles of pupil self-evaluation awaits the acceptance of a different role of the teacher from the one usually assigned. This is the role that Carl Rogers describes as follows in his article "Learning to be Free":

> Most important of these human resources is a teacher himself. He makes himself and his special knowledge and experience clearly available to the students, but he does not impose himself on them.
>
> The teacher thus concentrates on creating a facilitative climate and on providing resources. He may also help to put students in contact with meaningful problems. But he does not set lesson tasks or assign readings. He does not lecture or expound (unless requested to). He does not evaluate and criticize unless the student wishes his judgment on a product. He does not give examinations. He does not set grades.[21]

To evaluate the curriculum in terms of its provisions for self-evaluation by pupils, such data as called for by the following questions are needed:

Are pupils free to assess and state to teachers their problems, difficulties, and successes?

Are external evaluations, those by teachers and other observers, subordinated in importance to those by learners themselves?

Are school marks, diplomas, and similar indications of external judgment clearly identified to pupils for what they are rather than as the real goals of education?

Are pupils given progressively more responsible opportunities for evaluating their own learning and are their evaluations trusted by teachers?

Are parents taken into partnership in stimulating and considering faithfully pupil's self-evaluations?

Does the school follow up its former students? Later in this chapter we emphasize the use of follow-up data in curriculum evaluation. We also view follow-up of learners from one year to another, from one teacher to another, and from one school to another as a highly desirable provision of continuing attention to the individual student. At the secondary school level, the program should include systematic plans for following up learners as they go from the school to work, to college, to the military forces, or to homemaking. The usual type of follow-up study has been that of success and failure in college. Although this is useful, certainly a well-organized follow-up program must include much more than determination of grades in college.

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[21] Carl R. Rogers, "Learning to Be Free," *NEA Journal,* 52:29 (March, 1963).

Some proposals for preventing unemployment and other social ills would provide for a continuing counseling program for out-of-school youth. Thus John Gardner in 1960 argued for such a system to help the youth from high school to job in these words:

> What will such a system look like? For one thing, it will be a system in which such a young person's transition from the formal educational system to the outside world is not an unceremonious rejection, but a carefully planned transfer to a new setting for personal growth. Instead of feeling that he has been rudely dropped on the scrap heap, the youngster should feel that he is being assisted into new and different experiences. More importantly, it will be a system that begins to prepare for that transition long before it occurs and watches over it long after it takes place. . . .
>
> To be specific, every high school in the land should provide continuing vocational and educational counseling for all who leave school short of college. These services should be available until the boy or girl reaches the age of 21. As things stand today the high school does not provide such follow-up.[22]

TABLE 6

The Marks of a Good Curriculum: A Checklist for Appraising a School's Program

CRITERIA	APPRAISAL ITEMS TO NOTE STRENGTHS—WEAKNESSES—NEEDS
I. A good curriculum is systematically planned and evaluated (see Table 5)	
A. A definite organization is responsible for coordinating planning and evaluation.	
B. Steps in planning and evaluation are logically defined and taken.	
C. Ways of working utilize the contributions of all concerned.	

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[22] John W. Gardner, "From High School to Job" (reprint from the 1960 Annual Report; New York: Carnegie Corporation of New York, 1960), pp. 6–7. Also see James B. Conant, *Slums and Suburbs* (New York: McGraw-Hill Book Company, Inc., 1961), p. 41.

TABLE 6 (*continued*)

CRITERIA	APPRAISAL ITEMS TO NOTE STRENGTHS—WEAKNESSES—NEEDS
II. A good curriculum reflects adequately the aims of the school	
A. The faculty has defined comprehensive educational aims.	
B. The scope of the curriculum includes areas related to all stated aims.	
C. Each curriculum opportunity is planned with reference to one or more aims.	
D. In planning curriculum opportunities from year to year and in each area, teachers consider the total scope of aims.	
III. A good curriculum maintains balance among all aims of the school	
A. The curriculum gives attention to each aim commensurate with its importance.	
B. The total plan of curriculum opportunities in basic areas, school activities, and special interests reflects careful planning with respect to all aims.	
C. Guidance of each individual helps provide him a program which is well balanced in terms of his needs and capacities.	
D. The school organization, schedule, and facilities help in giving appropriate attention to each aim.	
E. Classroom activities and schedules are arranged so as to provide a balanced program of varied learning activities.	
IV. A good curriculum promotes continuity of experience	
A. Provisions are made for the smooth transition and continuing achievement of pupils from one classroom, grade, or school to another.	
B. Curriculum plans in areas which extend over several years are developed vertically.	
C. Classroom practices give attention to the maturity and learning problems of each pupil.	
D. Cooperative planning and teaching provide for exchange of information about pupils' learning experiences.	
V. A good curriculum arranges learning opportunities flexibly for adaptation to particular situations and individuals	
A. Curriculum guides encourage teachers to make their own plans for specific learning situations.	
B. Cooperative teaching and planning utilize many opportunities are they arise to share learning resources and special talents.	

TABLE 6 (*continued*)

CRITERIA	APPRAISAL ITEMS TO NOTE STRENGTHS—WEAKNESSES—NEEDS
C. Time allotments and schedules are modified as need justifies.	
D. In accordance with their maturities, pupils participate in the planning of learning experiences.	
E. The selection of learning experiences reflects careful preplanning by teachers and equally careful attention to the demands of the learning situation.	
VI. A good curriculum utilizes the most effective learning experiences and resources available	
A. Learning experiences are developed so that pupils see purpose, meaning, and significance in each activity.	
B. Needed, available resources are utilized at the time they are relevant and helpful.	
C. Use of the right learning resource for each pupil is encouraged.	
D. Teachers discriminate wisely between activities which pupils carry on independently and those in which teacher-pupil interaction is desirable.	
VII. A good curriculum makes maximum provision for the development of each learner	
A. The program provides a wide range of opportunities for individuals of varying abilities, needs, and interests.	
B. Extensive arrangements are made for the educational diagnosis of individual learners.	
C. Self-directed, independent study is encouraged wherever possible and advisable.	
D. Self-motivation and self-evaluation are stimulated and emphasized throughout the learning opportunities of the school.	
E. The curriculum promotes individual development rather than conformity to some hypothetical standard.	
F. The school attempts to follow up its former students both as a service to them and for evaluative data.	

APPLYING THE CRITERIA

We described ealier in this chapter the general sources and uses of criteria such as ours in the evaluation of the curriculum. It remains now to suggest more specific ways in which curriculum evaluators and planners secure evidence and reach judgments about the fit of the curriculum and the criteria. Judgments are reached by individuals and groups with or without evidence other than that of the more or less limited observations of the judges. Sound judgments include attention to specific evidence, we believe, and so we here describe four major types of data-gathering activities appropriate to curriculum evaluation: (1) appraisal of pupil progress, (2) follow-up studies of learners, (3) the use of opinion polls, and (4) experimental studies.

Appraisal of Pupil Progress

Inevitably tests of the goodness of the curriculum must consider the progress pupils make in the various behavioral changes the school aims to achieve. For example, several of our "marks of the good curriculum" (Table 6) could not possibly be fully applied to a school's curriculum without evidence as to how pupils progress through the school program. Thus, the evaluators using these criteria would need to learn in connection with Criteria IV and VII, respectively, how the average achievement of pupils compares from one grade to another and how data about individual pupil progress is used in educational diagnosis.

We have already commented in this chapter on the possible misuse of some data about certain aspects of pupil progress, especially as the sole evidence of the goodness of the curriculum. Valuable as such data may be, curriculum evaluation should not be confined to the results of standardized tests of achievement in some subjects. As a matter of fact, we regard the written test, whether or not standardized, as one of the most unreliable types of evidence with respect to many behavioral goals. We would suggest that appropriate types of evidence might include any of the following as the evaluation group attempts to check pupil progress against all possible behavioral goals:

1. *Case studies:* Comprehensive studies of individuals' behavior
2. *Conferences:* With parents, other teachers, employers, and so on—to secure data regarding an individual's behavior in situations not observed by the teacher
3. *Diaries and logs:* Kept by learners and analyzed by the teacher to secure various items of information
4. *Group evaluation of individuals:* Through rating scales and sociometric techniques to secure evidence from his peers as to an individual learner's acceptance and performance
5. *Interviews with learners:* To get information about their performance, understanding, and other items of behavior
6. *Inventories of many types:* To give information about such items as personality traits, outside activities, reading and listening habits, and use of time
7. *Observation of pupils:* In various situations to determine behavior of a specific nature

8. *Performance tests:* Including creative work, group productions, physical skills, and similar items of behavior best tested through observation of performance
9. *Pictures, still and motion:* For later observation of performance, appearance, and so on
10. *Rating scales:* Used by teacher, pupils, and others to estimate behavior on such varied traits as courtesy, speech, and legibility of handwriting
11. *Recordings:* Of individual voices and group discussion for later analysis
12. *Records of many types:* Achievement, anecdotal, attendance, autobiographical, cumulative, disciplinary, health, library, participation (in activities, discussion, elections), tests, and time studies
13. *Self-analyses:* Made by learners on checklists, rating scales, questionnaires, problem situations, and general questions
14. *Written tests:* Standardized, teacher-made, group-made, to test information and skills

The chief problem in securing evidence is to select the proper technique to appraise the behavior under consideration. The teacher's familiarity with many types of techniques is essential. Further information about these techniques is available in the professional literature, and several helpful references are cited at the end of this chapter.

Follow-up Studies of Learners

The term "follow-up study" is generally applied to studies made of youth who finish high school or who leave before graduating. However, we believe that the general purpose and technique of these studies is applicable at any grade level for evaluating curriculum planning. A follow-up study designed to secure evidence about the value of school experiences, and therefore their planning, is essentially an appraisal of pupil progress. It differs from the types of appraisal we have just described in that these are concerned with appraising progress during or at the end of a planned series of experiences, whereas a follow-up study focuses attention on progress *after* the experiences are past. Several types of follow-up studies useful for evaluating the curriculum are described in the following paragraphs.

Studies of School Graduates. The most common type of follow-up study is that made by a high school to determine what its students do after graduation. These studies may or may not be developed so as to give data which bear directly on the quality of the curriculum. Even information about the occupations followed by graduates has considerable implications for high school curriculum planning.

Follow-up studies of high school graduates may serve more specific purposes than identifying occupational placement. Among the helpful data used in curriculum planning and evaluation are the following:

1. Various items concerning college adjustment and success, such as marks, social activities, special interests and honors, and disciplinary records
2. Estimates by employers of graduates' success on the job
3. Information concerning various aspects of graduates' postschool living, such as leisure-time activities and family life
4. Information from graduates or others about their continuation of interests pursued while in school
5. Surveys of graduates' difficulties in various particulars, such as communication skills, social adjustment, and military service

Studies of Dropouts. Two types of studies are commonly made of learners who leave school before the end of the terminal year. First, studies of dropouts are usually concerned with determining the reasons why pupils leave school. In many schools such studies are frequently very illuminating as to the failure of the curriculum to provide for the needs of youth. National studies have been impressive for they show the number of youth who leave school before completion and thus they raise serious questions about the real universality of "universal" secondary education. Second, data regarding dropouts may be secured for the same purposes, other than college preparation, as for school graduates.

Some of the techniques of the dropout studies might be used by any curriculum planning group desiring evaluative information from learners who have left school. Two major difficulties in getting data should be noted: locating the dropouts and inducing them to respond to inquiries; and securing reliable information. Both difficulties may be partially met through the use of interviews rather than questionnaires. "Exit interviews" are frequently held with dropouts, for example. Although more difficult to arrange, follow-up interviews may also be desirable.

The kinds of information available from dropouts have valuable implications for curriculum evaluation: Why did they leave? What kinds of occupational choices did they make? What bearings did their previous schooling have on their postschool employment? What kinds of school experience do they regret not having had?

Studies of Learners at Subsequent Levels. Although not usually termed a "follow-up study," inquiries and analyses of learners' successes and difficulties at subsequent levels are commonly made. Unfortunately, these studies are frequently inadequate and are sometimes influenced by the bias of the curriculum planning group at the subsequent level. That is, without real study of the factors involved there is sometimes a tendency to blame poor teaching and planning at the previous level for low scores on achievement tests.

Studies of learners at subsequent levels have particularly promising uses in the elementary school or other levels where an entire learning group remains relatively intact from one year to the next. In such situations, with some assurance that the data presented are relevant and useful, the teacher at the lower level can formulate an evaluation pattern.

Studies of individual pupil progress at subsequent levels may also be fruitful. The further progress of the pupil for whom special learning experiences were planned to help him overcome disabilities, or the pupil whose special interests were provided for, or the pupil to whom special help was given with his adjustment problems, may be of real value to the teacher in planning for other learners with like problems.

Studies of Later Progress in Special Areas. Curriculum planning groups in special areas, particularly in the vocational field, make considerable use of follow-up studies. Business education departments, for example, give great weight in curriculum planning to employers' estimates of the deficiencies of employees trained in these departments. Similarly, information is widely secured in such fields as industrial arts, agriculture, art, music, and athletics.

Follow-up studies may also be made of special-interest activities of a somewhat less technical nature. Inquiries of homemakers as to the relevance to their needs of school instruction in homemaking are as pertinent to curriculum planning in homemaking as are employers' ratings of stenographers to planning in business education. Follow-ups of learners who go to college may well include analyses of the persistence of interest and competence in debate, dramatics, journalism, recreational activities, photography, radio, and similar special interests. Follow-up studies in the community can be made to determine the persistence of leadership training as revealed through offices held in local government, churches, civic clubs, and the variety of community organizations.

Use of Opinion Polls

Opinion enters into any program of evaluation. Even the appraisal of pupil progress through objective tests involves the use of teacher opinion in evaluating test results. Typical procedures usually are too greatly influenced by opinions of individual pupils, teachers, parents, citizens, or pressure groups, which are not carefully weighed as chance, sample, or biased opinions. The interpretation of opinion is a complex problem of considerable significance; a complete analysis of it is, of course, beyond the scope of this book.

Opinion polls are employed for a variety of purposes in educational work. National opinion polling agencies conduct general polls on educational issues. Professional organizations use polls in connection with their interests. School surveys frequently poll opinions of pupils, parents, and school personnel. State and local school systems use polls to sample or survey opinion on various specific issues. Individual schools and even individual teachers use "opinionnaires" for many purposes.

Polls on Specific Curriculum Issues. In curriculum planning and evaluation, some issue or issues frequently assume considerable interest. An opinion poll may be a very useful device for determining whether a position taken by a few parents, for example, is representative of all the parents or whether the few are simply a small but vocal minority.

Some precautions which may need to be observed in the use of opinion polls in evaluation follow.

1. If a sample survey is indicated, there should be adequate planning of the sample to ensure that the results will be representative of the total population.
2. If a comprehensive survey is intended, every possible step should be taken to get complete returns.
3. If the opinion may be influenced by the fact that the respondents' identities will be known, the poll should be made completely anonymous.
4. The respondents should be supplied adequate background for expressing opinions.
5. The wording of every item should be as simple and specific as possible.
6. All directions should be given as clearly as possible.
7. The form or the interview schedule should be tried out several times before its final use.
8. The questions and responses should be constructed in such a way as to facilitate tabulation and summarization.

Polls on an Individual School's Program. Polls of pupil, teacher, and parent opinion may give very helpful evidence regarding the total program of an individual school. This evidence may be without reference to any standard designated by the respondents; nevertheless, it tells what the respondents think is good and bad about the present curriculum. Such evidence from parents, for example, should enable the curriculum planning-evaluating group to answer questions of the following types:

1. Are parents satisfied or dissatisfied with the curriculum? To what extent and in what particulars?
2. Are teachers' expectations as to parents' desires for their children confirmed or denied? To what extent and in what particulars?
3. Do or do not parents understand what the school is trying to do for their children? To what extent and in what areas?
4. In what curriculum areas do parents believe their children's experiences are adequate and inadequate?
5. What are the handicaps to curriculum improvement recognized by parents? What handicaps do they fail to recognize?
6. What suggestions do parents offer which should be considered in curriculum planning?

The answers which analysis of opinion polls gives to these questions should be important for curriculum evaluation. Although it is not suggested that parent satisfaction or dissatisfaction is an adequate criterion alone, certainly this is a very important factor. If parents are dissatisfied, it is time for the faculty to take complete stock of itself. As a check, such questions as the preceding ones may also be answered by analysis of polls of pupil, teacher, and general lay opinion. Possibly the most effective use of opinion polls in a total school program is the analysis of opinions of such different groups to determine points of agreement and explanation of disagreements between the groups.

Experimental Studies

Experimental procedures to determine whether a particular curriculum project meets some criterion of goodness have been infrequently used in curriculum planning and evaluation. However, additional funds and personnel for research have facilitated an increasing use of these procedures in recent years. Illustrative of this approach is a description in the *Quest for Quality* series of a program in the "Mercury City Schools," which is prefaced by this statement:

> Any proposal for a major change or modification in the basic curriculum pattern in the system will usually be formally organized into a research study. Mercury school system staff members have a high regard for sound research procedures. There is an administrative staff premise that there should be a sound, basic design for any experimental projects that are carried out in the school system.[23]

The description goes on to report two illustrative studies, one in the teaching of arithmetic and one in the use of team teaching.

The summary volume in the *Quest for Quality* reports of approaches to school system evaluation noted that "for the most part, evaluation tended to be highly subjective, based upon personal observations and opinions rather than well-designed research" and made the following recommendation:

> Boards of education might well consider the possibility of increasing their research budgets to make funds available for use by the professional staff. Boards might also question the introduction of new program changes and curricular innovations arising from public clamor unless plans are made to determine the effectiveness of the changes recommended.[24]

In a similar vein, the NEA Project on Instruction made a more specific recommendation (No. 6):

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[23] *Quest for Quality,* No. 10, p. 11.

[24] Harris and Moore, *op. cit.,* p. 19.

> School systems should allocate an appropriate proportion of their annual operating budgets—not less than 1 per cent—for the support of research, experimentation, and innovation.[25]

We ourselves see experimental studies as occupying a highly significant role in curriculum evaluation. Their most important use is in connection with the systematic process of curriculum study and improvement we describe in Chapter 12, a process involving controlled evaluation of innovative practices. But even in the prior, diagnostic step of curriculum evaluation to determine the needs for improvement, the research type of activity helps establish more certainly those practices and programs which the evaluators can and cannot approve with confidence. Thus the curriculum planning and evaluating group should look to comparative and experimental evidence of the excellence of various aspects of the curriculum wherever studies can be designed and carried on to yield such evidence. Ongoing programs of curriculum planning and improvement build into their procedures adequate plans for such studies so that reliable evidence is constantly available as to needs for curriculum improvement.

EVALUATION AS A PHASE OF CURRICULUM PLANNING

Evaluation has been viewed in this chapter—indeed, throughout this book—as an integral part of the curriculum planning process. In the first place, the starting point in sound planning is an assessment of curriculum needs. For the total school program, evaluation by such a set of criteria as we have presented is essential. Even for evaluating a particular curriculum area or a particular classroom's program, some set of criteria, compatible with those for the total curriculum and based on the aims of the area or the classroom, is needed.

In the second place, periodic or almost continuous reassessments are needed to determine progress. Thus the school curriculum committee needs to review frequently its earlier determination of curriculum deficiencies to make certain remedial steps are being appraised with indicated modifications taken.

Third, distinct innovations in the school program need careful study, usually of an experimental nature. Such studies, we believe, ought to be encompassed in a total plan of evaluation so that from time to time the planning and evaluating group can review evidence as to how innovations are fitting into the entire curriculum.

Our further suggestions regarding various evaluative procedures are presented in Part 5.

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[25] Project on the Instructional Program of the Public Schools, *op. cit.*, p. 22.

FOR FURTHER STUDY

AHMANN, J. STANLEY, AND MARVIN D. GLOCK. *Evaluating Pupil Growth*. 2nd ed. Boston: Allyn and Bacon, Inc., 1963.

Comprehensive treatment of evaluation in elementary and secondary schools. Chapter 2 relates the process of evaluation to that of formulating educational objectives.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, N.E.A. *What Are the Sources of the Curriculum? A Symposium*. Washington, D.C.: The Association, 1962.

Their criteria for evaluating the curriculum are stated or implied in the articles written by several curriculum leaders. Each article expresses its author's interpretation of appropriate sources of the curriculum.

CHAUNCEY, HENRY, AND JOHN E. DOBBIN. *Testing: Its Place in Education Today*. New York: Harper & Row, Publishers, 1963.

An overview of current educational testing developments which describes both the limitations and possibilities of tests in the educational program.

COMMITTEE ON ELEMENTARY EDUCATION, SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS. *Evaulating the Elementary School: A Guide for Cooperative Study*. 1964 ed. Atlanta: The Association, 1964.

Guide for self-study by elementary school faculties seeking accreditation by the Southern Association of Colleges and Schools. Replaces the widely used 1951 edition but retains the focus on the faculty's own development of purposes and criteria.

HARRIS, LEWIS E., AND CLYDE B. MOORE. *Keys to Quality: Final Booklet in the Quest for Quality Series*. Evanston, Ill., and Washington, D.C.: National School Boards Association and American Association of School Administrators, 1960.

This is the fourteenth and final booklet in the *Quest for Quality* series on school evaluation. The other thirteen booklets describe the evaluative approaches used in selected school districts. This final one summarizes and interprets the various approaches.

JOINT COMMITTEE ON TESTING, Established by the American Association of School Administrators, Council of Chief State School Officers, and National Association of Secondary-School Principals. *Testing, Testing, Testing*. Washington, D.C.: The Associations and the Council, 1962.

Analysis of the use of externally prepared tests with recommendations to avoid abuses and improve uses.

MALLERY, DAVID. *High School Students Speak Out*. New York: Harper & Row, Publishers, 1962.

Report of a study conducted in eight cooperative schools under the auspices of the Committee on School and College Relations of the Educational Records Bureau, of high school students' evaluations of their schooling. See especially Part II, "The Curriculum," for many critical comments and for the students' own criteria.

MOULY, GEORGE J. *The Science of Educational Research*. New York: American Book Company, 1963.

Useful treatment of educational research procedures, including experi-

mental studies (Chap. 12). Also presents a review and evaluation of educational research (Chap. 14) and a selection and review of significant studies (Chap. 15).

NATIONAL EDUCATION ASSOCIATION, PROJECT ON INSTRUCTION. *Schools for the Sixties.* New York: McGraw-Hill Book Company, Inc., 1963.

Emphasizes the necessity of school self-studies as a basis for school improvement. See especially Chap. 4, "In the Future . . ."

NATIONAL STUDY OF SECONDARY SCHOOL EVALUATION. *Evaluative Criteria, 1960 Edition.* Washington, D.C.: The Study, 1960.

Third edition (first, 1940; second, 1950) of the guide to school evaluation sponsored by the regional accrediting associations and widely used by secondary schools seeking accreditation by these agencies. Includes detailed checklists and other guides for evaluating each phase of the school's organization and program.

———. *Evaluative Criteria for Junior High Schools.* Washington, D.C.: The Study, 1963.

First edition of the guide for junior high schools. Follows the organization of the original single volume, *Evaluative Criteria.*

RUSSELL, JAMES E. *Change and Challenge in American Education.* Boston: Houghton Mifflin Company, 1965.

Analysis of current American education—elementary, secondary, higher, teacher—in terms of the author's thesis that its central role should be the development of the rational potential and theoretical insights of all students.

TABA, HILDA. *Curriculum Development: Theory and Practice.* New York: Harcourt, Brace & World, Inc., 1962.

Taba's comprehensive presentation of a systematic approach to curriculum development includes two chapters especially relevant to curriculum evaluation: 15, "Diagnosis in Curriculum Development," and 19, "Evaluation of the Outcomes of Curricula."

PART 4

Organization of the Curriculum and Instruction

CHAPTER 8

The Development of the Curriculum Plan

In Parts 1–3, consideration was given to the factors that should determine the nature of the education to be provided children and youth in the schools. Next the educator faces the responsibility of actually developing a curriculum. What kinds of learning experiences shall be planned for pupils? How should these units of experience be organized? What kind of curriculum should the school provide so that pupils may attain the objectives of education it has defined?

THE FORMULATION OF A CURRICULUM PLAN

These decisions become the curriculum plan. Such a plan defines the nature of the educational experiences to be provided pupils, the methods of selecting and organizing the elements of the curriculum into a coherent and unified program of education, and the place in the education of the child and the sequential arrangement in which the elements of the curriculum are to be developed. A plan for the curriculum is essential so that the schooling of the young may be guided systematically and efficiently to the attainment of the outcomes sought for pupils. Some authorities choose to call the plan itself "the curriculum," but inasmuch as we believe that the curriculum should be defined as the learning opportunities actually provided pupils by the school, we designate the scheme for the education of pupils as "the curriculum plan."

The curriculum of a school is encompassed within these aspects of an educational program:

1. The class program of the school, which utilizes bodies of content selected and organized on some predetermined structure
2. Extraclassroom activities
3. Services provided by the school, such as guidance, health, library, food, and transportation services, and special services for exceptional children
4. The social life of the school and the interpersonal relationships among pupils and teachers
5. Organizational policies and procedures for providing the instructional program

A curriculum plan, therefore, to be comprehensive, significant, and adequate, should embrace all these aspects of schooling. It should give guidance, insight, and assistance to the staff of the school on the proper kinds of learning experiences to be provided pupils for the attainment of goals, and the structure for organizing and developing the program. A cursory examination of curriculum guides, school publications, and official manuals reveals that few school systems systematically and adequately develop plans for organizing and guiding extraclassroom activities as a part of the curriculum; that only meager, if any, efforts are made to develop guidance and counsel as significant educational experiences, and similar conditions exist for the other services of the school; that the social life of the school is often regarded as something that exists, but the school should do little about; and that human relationships as a very significant aspect of the experiences of pupils do not need to be planned as a deliberate part of schooling. The formal curriculum plan, in fact, if one exists at all, is principally a guide for the offering and teaching of school subjects, only one, albeit the major one, aspect of a well-rounded educational program.

We believe that curriculum planning in the years ahead must take adequate account of the social conditions in which schooling takes place, and that schools and school systems should imaginatively and insightfully develop plans for the improvement of all five aspects of the curriculum rather than just the subject offerings. The evidence that has rapidly accumulated on the utmost importance of taking account of the social conditions of the families of the neighborhood in determining the character and the nature of the educational program, for example, reveals the necessity for including in any curriculum plan, and particularly in the large urban school districts, provisions for ameliorating the deleterious effects of cultural and social deprivation among children of impoverished families, or children deprived of adequate model-personages in the home.[1] Some of the recent social welfare programs of the federal and state governments do include, perhaps to the embarrassment of the professional curriculum planner because of his lack of concern about the matter in the past, "curriculum" plans for just such purposes. Should not the school now fully carry out its responsibility for the development of an adequate curriculum plan that encompasses appropriate kinds of educational experiences for all children?

What constitute the important factors to be considered in formulating a curriculum plan? They were discussed in Parts 1–3, but for purposes of synthesis, let us now put them together in a model.

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[1] Gene C. Fusco, "Preparing the City Child for His School," *School Life,* 46:5–8 (May, 1964); and Martin Deutsch, "Facilitating Development in the Pre-School Child: Social and Psychological Perspectives," *Merrill-Palmer Quarterly,* 10:249–263 (July, 1964).

The Process of Curriculum Planning

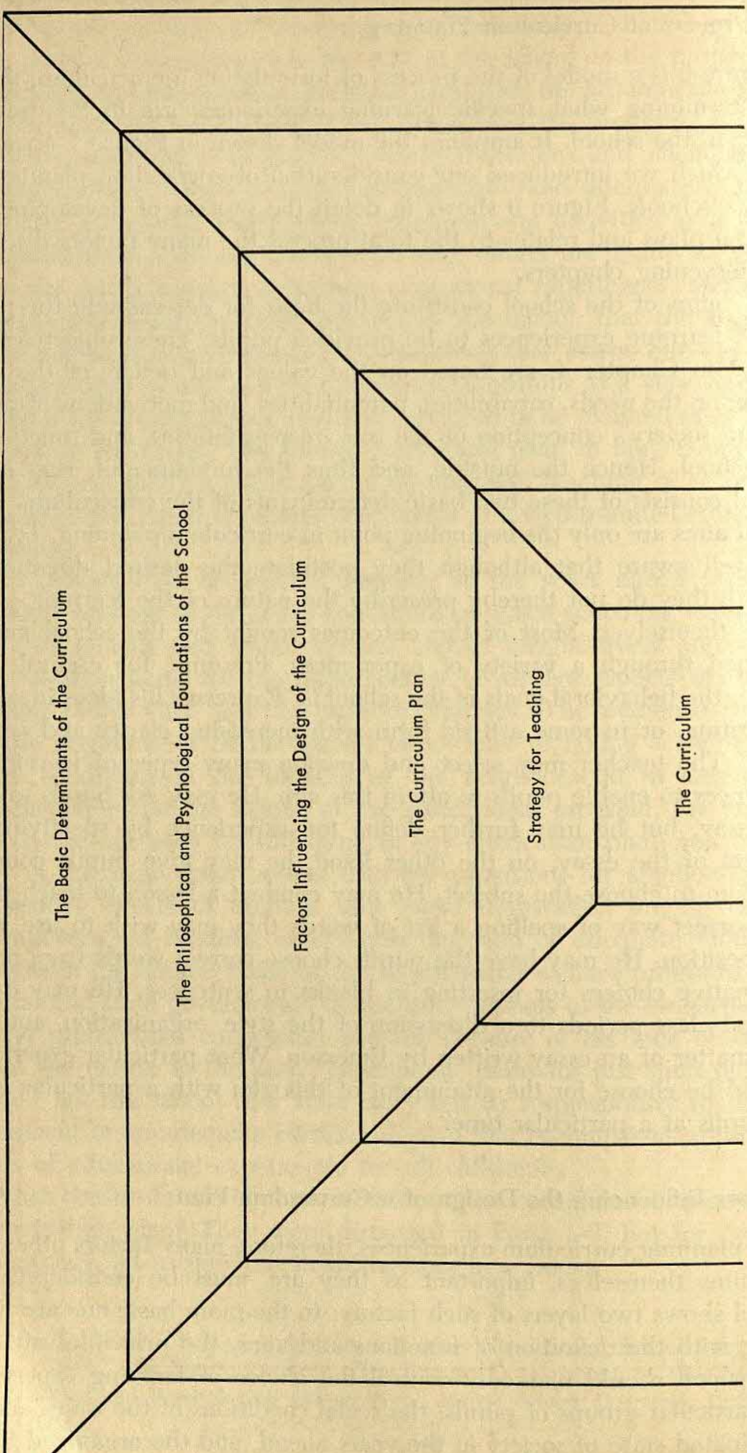
Figure 9 is a model of the process of formulating a curriculum, that is, of determining what specific learning experiences are to be provided pupils in the school. It amplifies the model shown in Figure 1 (page 7), with which we introduced our consideration of curriculum planning for today's schools. Figure 9 shows in detail the process of developing curriculum plans and relates to the total process the many factors discussed in intervening chapters.

The aims of the school constitute the basis for determining the nature of the learning experiences to be provided pupils. These objectives, discussed in Chapter 4, are based on the values and beliefs of the social group; on the needs, capabilities, potentialities, and motivations of pupils; and on society's conception of the role, responsibilities, and functions of the school. Hence the outside, and thus the fundamental, ring of the model consists of these two basic determinants of the curriculum.

But aims are only the beginning point in curriculum planning. Teachers are well aware that although they postulate the desired directions of growth they do not thereby prescribe the nature of the learning experiences themselves. Most of the outcomes sought by the school may be attained through a variety of experiences. Presume, for example, that one of the behavioral goals of the school is "Expresses his ideas in speech, in writing, or in some artistic form with increasing clarity and correctness." The teacher may select and develop many types of learning experiences to enable pupils to attain this aim. He may ask pupils to write an essay, but he may further define the experience by specifying the subject of the essay; on the other hand, he may give pupils complete freedom to choose the subject. He may conduct a lesson to teach pupils the correct way of spelling a list of words they may wish to use in the composition. He may have the pupils choose correct words from among alternative choices for inserting in blanks in sentences. He may devote several class periods to a discussion of the style, organization, and subject matter of an essay written by Emerson. What particular experiences should he choose for the attainment of this aim with a particular group of pupils at a particular time?

Factors Influencing the Design of a Curriculum Plan

In planning curriculum experiences, therefore, many factors other than the aims themselves, important as they are, must be considered. The model shows two layers of such factors: in the more basic one are listed, along with the definition of functions and aims, the principles of learning, which should markedly control the choice of learning experiences for particular groups of pupils; the social conditions of the times and the anticipated state of society in the years ahead; and the organized bodies


The Basic Determinants of the Curriculum
The Philosophical and Psychological Foundations of the School
Factors Influencing the Design of the Curriculum
The Curriculum Plan
Strategy for Teaching
The Curriculum

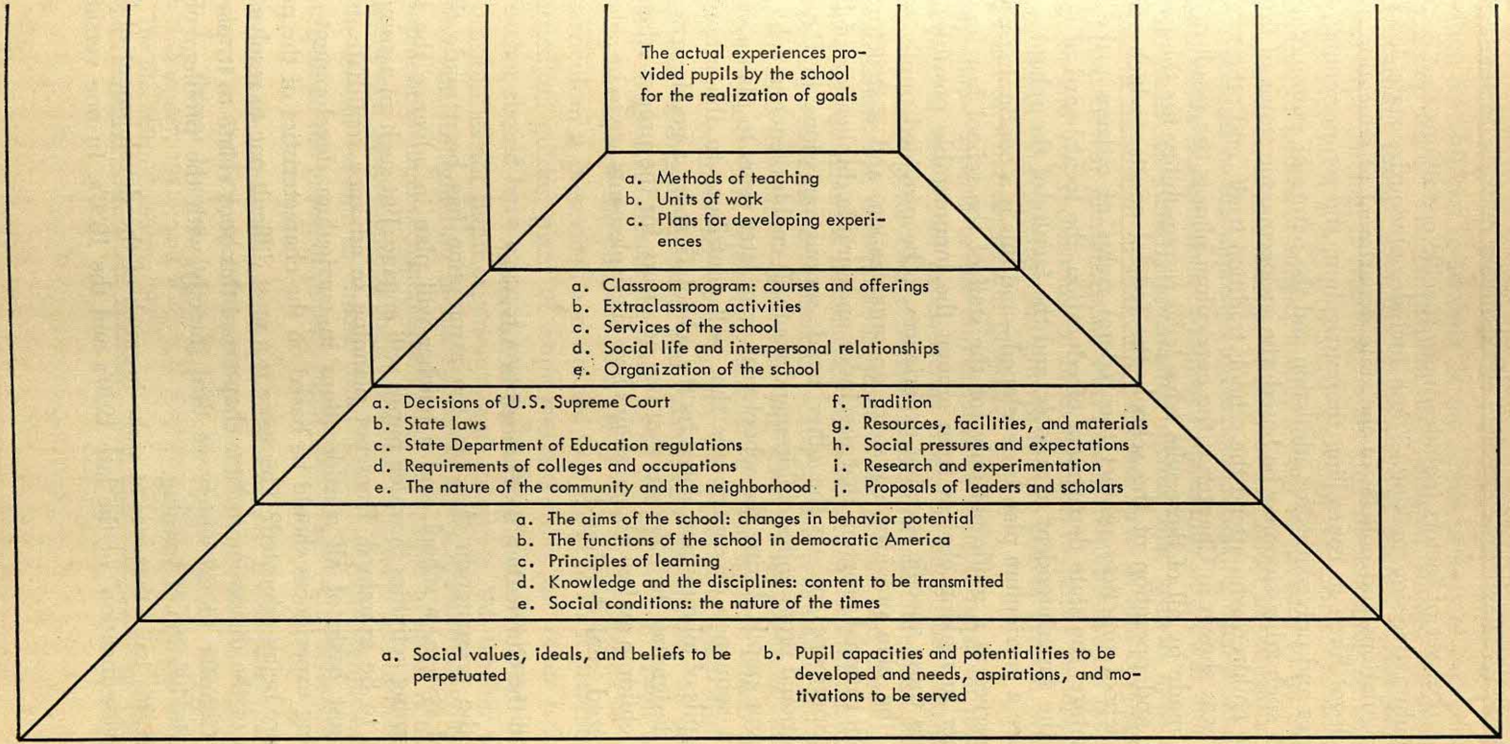

The actual experiences provided pupils by the school for the realization of goals
a. Methods of teaching
b. Units of work
c. Plans for developing experiences
a. Classroom program: courses and offerings
b. Extraclassroom activities
c. Services of the school
d. Social life and interpersonal relationships
e. Organization of the school
a. Decisions of U.S. Supreme Court
b. State laws
c. State Department of Education regulations
d. Requirements of colleges and occupations
e. The nature of the community and the neighborhood
f. Tradition
g. Resources, facilities, and materials
h. Social pressures and expectations
i. Research and experimentation
j. Proposals of leaders and scholars
a. The aims of the school: changes in behavior potential
b. The functions of the school in democratic America
c. Principles of learning
d. Knowledge and the disciplines: content to be transmitted
e. Social conditions: the nature of the times
a. Social values, ideals, and beliefs to be perpetuated
b. Pupil capacities and potentialities to be developed and needs, aspirations, and motivations to be served

Figure 9: Planning Curriculum Experiences

of knowledge available for use in developing a unit of learning experience.

The next set of factors includes more specific conditions that constrict curriculum decision making. These include, obviously, state laws and the regulations and policies of the state department of education, which have legal force in controlling the curriculum; the requirements set by colleges and universities for admission and the nature of examinations on which such admission may be based; the socioeconomic status of families of the children who attend the school; tradition itself; and others.

As was shown in Chapter 1, the curriculum plan is the result of decisions made by all of those who have legal responsibility for the government and operation of the school—the federal courts (which require that school practices protect the federal rights of citizens), the state legislature, the state department of education, the local board of education, the superintendent of schools, and the faculty of the school.

Once a curriculum plan is developed—and this is a continuing process—it serves as a guide not only for the staff of the school but for each teacher in making choices from among the innumerable possible alternatives those specific learning experiences to be provided pupils. Moreover, the plan provides a system, an organization, and a structure for the educational program that precludes undesirable duplication of learning experiences or, on the other hand, serious omissions in the total educational program for children and youth. It enables teachers who have the same pupils during the school year or in later years to plan a variety and a sequence of experiences that will contribute to the attainment by pupils of all aims postulated by the school. In short, a good curriculum plan designates the elements that are necessary for the proper education of all children and youth and shows how these elements are to be selected, organized, and developed.

Should the Curriculum Be Planned in Advance?

In the presentation thus far, the assumption has been made that a school system, a school, and a teacher will plan in advance the kinds of learning activities in which pupils will engage. But such an assumption needs to be examined. Does not planning in advance repudiate one of the most basic of all considerations in curriculum development—that learning experiences should be based on the characteristics of the pupils who are being educated? This issue is a most difficult one to resolve, and much of the discussion in later chapters of this book relate to it, particularly Chapter 11, in which we deal directly with the problem of the individualization of learning.

It is this issue that was at stake in much of the development of "progressive education" of the late 1920's and the 1930's. In one version of that movement, a group of educators railed against efforts to plan the curriculum for children in advance of the actual process of experiencing by the group itself.[2] The curriculum, they insisted, should be designed by the learning group, with the "guidance," of course, of the teacher, as it was experiencing. It was their belief that the planning of units of experience was itself a highly desired aspect of education, and that the prescription of bodies of subject matter set out in advance to be learned was a repudiation of the concept of interest and effort in education.

The exponents of this approach to curriculum making tried assiduously to crowd under the umbrella of Dewey's philosophy of growth, but they failed to heed his stated and restated dictum that growth must have direction—it must lead to something, it must have an aim that ends in social good. Dewey himself repudiated this effort to misuse his concepts of growth and the reconstruction of experience to justify experiencing for the sake of experiencing, and growth for the sake of growth, without a definition of what constitutes growth.[3]

Many major aspects of the curriculum, we believe, must be planned in advance of the act of experiencing. Teachers and other curriculum workers responsible for choice making must, first and foremost, as was stated in Chapter 4, determine the aims of the school, and these should be stated as the changes in behavior or behavioral potential desired as a result of the experiences sponsored by the school. When aims are postulated, which is inevitable—otherwise, why have a school?—there must be some control over the types and varieties of experience in which pupils engage. Such controls represent simply the curriculum plan. But such a plan can be highly detailed and exceedingly prescriptive or general and only suggestive. Hence the issue as to the nature and extent of advanced planning of the curriculum is really one of the degree to which the curriculum is prescribed and defined as a result of such planning.

Curriculum guides, plans of scope and sequence, and other helps for the teacher should have a broad sweep, be suggestive, list many alternative possibilities for pupil experience, and encourage the teacher to use initiative and imagination in his efforts to select, plan, and guide the development of units of experience for the realization of aims. A teacher may achieve a desired end through a number of specific acts of behavior; thus he should be free to choose those which are most significant and meaningful to the group of pupils taught, and which best challenge them to develop their talents and potentialities. It is within such broad possibilities of choice making that the curriculum may be adapted to the needs and capabilities of the learner.

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[2] For articulate expressions of this point of view, see Harold Rugg and Ann Shumaker, *The Child-Centered School* (New York: Harcourt, Brace & World, Inc., 1928); L. Thomas Hopkins, *Interaction: The Democratic Process* (Boston: D. C. Heath & Company, 1941); and William H. Kilpatrick, *Foundations of Method* (New York: The Macmillan Company, 1925).

[3] John Dewey, *Experience and Education* (New York: The Macmillan Company, 1938).

Preplanning? Yes. Prescription? No. Suggestions, ideas, illustrative plans, and examples? Yes. Detailed outlines, rigid time allotments, specified lectures, required experiments, uniform tests? No. Teacher initiative and freedom of choice? Within limitations imposed by the accepted aims of the school and the necessity for correlation and integration of the educative experiences of each pupil. Selection of experiences by learners? Only within a designated structure: otherwise why have a teacher if he does not use his maturity of judgment and his wisdom to guide the direction of growth of his pupils? Pupil choices among alternative kinds of experiences approved by the teacher? Yes. Pupil participation in developing the learning activity? Yes.

THE CLASSROOM PROGRAM OF THE SCHOOL

The most significant part of the curriculum plan for a school, a school system, or a state system of education among those listed in the model is the organized class program. It is this aspect of the educational program that constitutes the major endeavors of the school, and, from the standpoint of parents and citizens, the primary reason schools are established.

Planning the Class Program

In formulating the program of classwork, from kindergarten through senior high school, three types of decisions must be made:

The Scope of the Class Program. What should be encompassed within the educational experiences to be provided pupils in organized class situations? The range of possibilities for learning activities in a school is almost unlimited; curriculum planners must decide what types and kinds of units of work should be included within the class program. Should kindergarteners be taught to read? Should a study of human reproduction and sex relationships be included in the work of the junior high school? Should calculus be taught in the twelfth grade?

The Allocation and Sequential Study of Content. At what level or year of schooling should instruction in the various areas of subject matter be introduced, how long should it be continued, and what should be the sequence in which aspects of the subject are to be studied? Should kindergarteners, for example, be taught to compute? Should formal instruction in reading end in the eighth grade? Should the concept of sets be developed in the first grade or not until college? Should instruction in foreign language begin in the elementary school, the junior high school, or the senior high school? Should American history be studied in the elementary school, in the junior high school, and again in the senior high school? What is a spiral plan of sequential planning?

The Organization of Classwork. What shall be the structure for unifying and systematizing the learning activities of pupils? Neither a scope nor a sequence for the educational program is possible without a structure or an organizational plan for education.

The Scope of Classwork

The scope of educational experiences made available to pupils should enable each of them to attain the goals and objectives of education. This becomes, then, the primary consideration in determining the scope of the curriculum. As we stated in Table 6 (page 254), which lists the marks of a good curriculum, "The scope of the curriculum includes areas related to all stated aims." In developing a curriculum plan, the faculty of a school should analyze the units of experience to be developed in the classrooms to make certain that the pupils will have the opportunity to attain all objectives defined for their schooling. This should be an analysis of scope on both a longitudinal and a horizontal basis.

One of the most serious deficiencies of curriculum plans throughout the schools of the nation is the failure to match objectives and the planned units of classwork. Sometimes the fault lies in the formulation of the objectives—they are unrealistic, inadequate, or poorly stated; but teachers must acknowledge that all too frequently units of classwork are planned and developed without much consideration being given to the outcomes to be attained from them. On the other hand, aims will not be achieved if the necessary units of learning experience are not provided pupils at all. It is all too easy for curriculum workers, for example, to accept with alacrity this statement, "The purpose which runs through and strengthens all other educational purposes—the common thread of education—is the development of the ability to think,"[4] and then fail to provide systematically and adequately units of experience that enable pupils to achieve this goal. But a more serious fault is to include units of classwork because they have traditionally been taught in the school, or the teacher enjoys teaching them, or the pupils express an interest in them and to include these units without specific determination of the objectives that will be served, and their validity for this group of pupils at that point in their schooling.

The scope of the curriculum should be evaluated on such a basis not only for the entire program, but also for each individual pupil. An almost shocking report on the classwork of pupils[5] reveals the necessity for such an evaluation. The education of a pupil is incomplete and inadequate if he does not have the opportunity to engage in experiences that will enable him personally to attain the goals of education, regardless of what may be true for other pupils.

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[4] Educational Policies Commission, *The Central Purposes of American Education* (Washington, D.C.: National Education Association, 1961), p. 12.

[5] John H. Lonsbury and Jean V. Marani, *The Junior High School We Saw* (Washington, D.C.: Association for Supervision and Curriculum Development, 1964).

Allocation and Sequence of Units of Experience

Determination of the school grade or level and the order in which the many units of experience that constitute the classwork of the school from kindergarten through high school are to be taught is the second major aspect of the development of the curriculum plan. And this, too, is a very challenging and difficult undertaking for the curriculum worker. It must be based on readiness, but, as has been noted in Chapter 6, this is a concept on which there is a lack of research evidence and definitiveness.

These are the principal factors that should determine the time in the schooling of the individual pupils when various types of classwork should be developed and the kinds of units, both as to content and basis of organization of the subject matter, that should follow in some sequential order in the school program:

I. Psychological factors
  A. The nature of the learning process
    What is the process by which children and youth acquire facts, psychomotor skills, concepts, generalizations, understandings, attitudes, values, ideals, aspirations, self-concepts, and similar products of school experience?
    What kinds of units of works will provide the experience that best assures the attainment of desired outcomes?
  B. Drives, interests, needs, concerns, and motives of the learner
    What are the significant motivational forces of the learner at that particular stage of his development?
  C. Psychological, social, emotional, and physiological maturity
    Is the pupil mature enough to undertake the learning experience?
  D. The continuity of experience
    Is the growth and development of the child continuous and progressive in terms of his individual rate of development?

II. Logical factors
  A. The logical sequence of content
    What prerequisite knowledge or skills are necessary to undertake successfully further study of a body of content?
    What psychomotor skills are needed to cope with a learning situation or to extend the level or scope of skill?

- B. The structure of subject matter
    - What sequential arrangement of content will enable pupils to understand the structure of a discipline?
    - How may the principles of inquiry and discovery be taught?

III. Philosophical factors

- A. The aims of education
    - What kinds of behavioral outcomes and changes in behavioral potential are of most worth for a pupil at any point in his schooling?
- B. The extent of schooling
    - How long should society provide formal programs of schooling for each individual?
    - How long will a pupil probably remain in school?
- C. Legal requirements
    - Does the state specify certain types of units of classwork at prescribed levels?
- D. Requirements of postsecondary school institutions
    - What control exists in college admission requirements?
- E. Tradition
    - Does the controlling social group expect or demand that certain types of content or subject be taught at particular levels of schooling?
- F. The integration of learning
    - What bodies of learning reinforce and supplement each other so that pupils are able to integrate experience into organized sets of outcomes?

Inasmuch as any or all of these factors may enter into the determination of the level at which units of work are introduced into the class program and the sequence in which further study in this same area may be subsequently undertaken, the choices confronting curriculum planners are indeed complex. Many curriculum plans actually may take into consideration only a few of them. For example, the level at which foreign languages are studied is usually determined philosophically, not psychologically. Traditionally, the subject of world history is studied in senior high school before American history, in part for logical reasons, since the latter subject has already been studied in the elementary and junior high school and partly because of tradition. The study of vocational agriculture begins in most schools in the ninth grade principally so that farm youth will be able to study a subject of great significance to them at the outset of the traditional four-year high school program, thus encouraging them to remain in school.

Curriculum planners know, also, that psychological studies have been of little help to them in determining grade placement or sequence. It is only within the last few years that even a meager knowledge of the process of concept formation, or of the ability of children to generalize or to understand abstract ideas has become available to educators. Grade placement and sequential arrangement of content has had to be based quite largely on hunches, observation of children in classrooms, test results, and some rather hazy ideas on readiness. The writers of school textbooks have played the leading role in determining placement and sequence in schools.

And the situation is not heartening. Psychologists are only beginning to provide trustworthy principles on even a few of the basic aspects of learning and development pertinent to placement and sequence; academicians have contributed significantly, as shown in Chapter 9, to the definition of a logical structure for some of the disciplines, but much still remains to be done.[6] Philosophically, educators disagree on what content and what learning outcomes are of the most worth for pupils at particular levels of schooling.

A great deal of experimentation with a variety of plans for placement and sequence needs to be made. And many school systems are now undertaking such studies. National study commissions and project staffs at universities and colleges have proposed plans and prepared materials for use in the schools that are being extensively tested throughout the country. Demonstration centers have been established under local, state, and national auspices. All these efforts are helpful, but the staffs of school systems and state departments of education who have legal responsibilities for formulating curriculum plans will still have to base many decisions on their judgment of what is proper and workable.

Moreover, the problem is exceedingly complex because children differ in capacities, levels of maturity, and rates of growth and development. What constitutes a proper placement and sequence of learning activities for one child may not be appropriate for another child, even though he may be the same chronological age.

The Program of Studies

The scope and sequence of classwork in a school is usually shown by a program of studies. Almost everyone who has attended school is familiar with such a program. Many school systems publish curriculum guides for both the elementary and the secondary schools that contain the program of studies and, often, a brief description of the various subjects or the offerings of other types. At the secondary level such a guide is also published in student handbooks or in bulletins prepared for pupil registration. A daily schedule of classwork is often included in these bulletins; in elementary schools, each teacher of a self-contained classroom may post a daily schedule showing classwork and time allotments. In ungraded elementary and secondary schools, only a list of subject areas or other broad designations of class activities may be prepared.

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[6] Philip Phenix, in *Realms of Meaning* (New York: McGraw-Hill Book Company, Inc., 1964) has endeavored to provide a schema for organizing and evaluating subject matter in many fields of study and for determining scope and sequence.

Further delineation of scope within the subjects or other organizational modes of content is usually done by detailed curriculum guides or courses of study or, perhaps more commonly throughout the United States, by the textbooks used in each subject or program. As will be shown in the next section, such guides may recommend specific units of work, including content and class activities for each subject field or area of study. These guides or the adopted textbooks also recommend the placement and sequence of specific units of work simply by the order in which they appear in the guide or the textbook.

Although the basic program of studies of the school is rather closely followed by the staff in developing the class program, many teachers will deviate from the recommendations of guides for each subject or field or from the units of study included in the textbook. Thus the prescriptiveness of a program of studies and the curriculum guides and textbooks available for developing the program depend, first, on the nature of the publications themselves and, second, on the initiative and ingenuity of the teacher.

The Organization of Classwork

Four bases for selecting and organizing classwork were identified and discussed in Chapter 5: (1) bodies of subject matter selected and logically organized on the basis of designated structures, focal points, strands, or centers; (2) life activities; (3) needs, problems, interests, and experiences of pupils; and (4) analysis of job requirements. Which of these provide a desirable base for planning classwork?

Among the elementary and secondary schools of the United States, all four bases are used. But each is used for specific parts of the class program at particular levels of schooling. It would be foolish, and certainly showing a degree of rigidity unbecoming to curriculum planners, to insist that one and only one method of organizing content be used throughout the curriculum plan. Let us illustrate some common practices in the selection and use of organizational bases.

Kindergarten. In kindergarten, content is usually selected on the basis of life activities and of personal needs, interests, problems, and experiences. Little attention is given at this level to organized bodies of subject matter, but many of the experiences do provide a basis for using knowledge *per se* in the acquisition of further knowledge. A kindergarten class, for example, may study such units as "How We Work Together at School," "What Our Neighborhood Is Like," "How Can We Work Together at Home?" "The Supermarket," "Trains," and "Workers Who Help Us at Home, at School, and in the Neighborhood." But they may also "Count

Objects by 1's to 10," "Arrange Objects in Order," "Describe Form and Shape of Objects," "Compare, Sort, and Match Objects." Kindergarteners "Discuss Kinds of Weather," "Describe Bodies Seen in the Sky," and study "Farm Animals."

And, of course, attention is also given to the development of many psychomotor skills, and to growth in affective behavior. Many of the units of learning experience may be deliberately selected and planned to achieve objectives in these two domains, with a variety of content being used. For example, children are encouraged to talk about events and incidents of interest to them, regardless of content.

Primary Grades. In the primary grades, most schools make use of three of the four bases for organizing content—bodies of subject matter; life activities; and needs, interests, problems, and experiences of pupils. Job analysis is not appropriate as a direct means of organizing content at this level. Many units of classroom work in these grades are planned and taught specifically for the purpose of developing psychomotor skills, with content being a minor consideration, although content appropriate for the skill is of course used. For example, the teacher may develop mathematical concepts and skills by the use of Cuisenaire rods, with the content consisting of problems to be solved or relationships to be determined. Affective behavior is fostered in units of work developed also for the achievement of cognitive behaviors. Content is usually selected for its contribution to knowledge and understanding, with affective behaviors associated with these outcomes.

Subject matter units, logically organized on the basis of a focal point, such as strand, theme, concept, structure, chronology, or spatiality, are extensively used in the primary grades. Examples of such units of work are "Understanding Our Solar System," "Dramatizing Historical Events in Pageants, Dioramas and Pantomimes," "Using Concepts of ½, ⅓, and ¼ in Meaningful Situations," "Sets and Numbers," "Sets of Points," "Congruence of Geometric Figures," "The Universe," "Forces and Elements," "Indians," "Machines," "Food and Nutrition," "What Our Community Is Like," and "What the Sun Is and How It Affects Our Lives."

But the life activities of people are extensively used also in grades 1, 2, and 3 as the basis for selecting and organizing content. Examples of such units of work are "Finding Out How the Postoffice Helps Us," "Money," "Riding Bicycles and Caring for Them," "How People Travel and Communicate," "Enjoying the Growth and Beauty of Trees and Spring Flowers," "What Good Health Habits Should We Have?" "How Does Our Community Provide for Safety, Health, and Recreation?"

Class units based on needs, interests, and experiences of pupils are also developed to some extent in primary grades. Moreover, in developing units organized on other bases, personal concerns and interests of pupils often receive attention, largely because of motivational reasons. Although it is difficult to distinguish between life activities and needs and interests as bases for selecting and organizing content, these titles illustrate the latter modes of organization: "How Can We Help People Know about Our Schools?" "Early Cleveland," "What Good Health Habits Should We Have?" "Our Homes and How We Live in Them."

Upper Grades. In the upper elementary school grades, even a cursory examination of curriculum guides reveals extensive use of organized bodies of subject matter as a basis for planning classwork. Content becomes more structured on a logical rather than a sociological or psychological basis. It is selected primarily because it will contribute to the systematic mastery of a subject field.

We have searched in many curriculum guides issued by local and state school systems and found very few examples of class units of work organized on the basis of life activities or the needs, interests, and experiences of pupils. This is not to say that this method is not used, but it is quite evident that most school systems in the 1960's are developing units of work in the upper elementary school on the basis of content selected and organized in terms of strands, focal points, themes, concepts, generalizations, or other organizational elements that inhere in the subject matter, rather than in the life experience of people or of the pupils themselves. This situation reflects the change that took place in the selection and organization of curriculum content during the latter part of the 1950's and the early 1960's. However, acknowledging that the organizing base has largely become subject matter *per se* should not obscure the obvious fact that teachers nevertheless draw on the past experiences and interests of pupils in developing the subject matter units of work, and that the activities of people in the rounds of their daily life, both in group and in individual action, are studied in the subject matter units to develop insight, understanding, and concepts among pupils.

The Junior High School. In the junior high school, the organizational basis of classwork in the academic school subjects is subject matter, selected in accordance with a designated focus.

In block or core programs a life activities, a social problems, or a personal problems base may be used to select and organize content. But it should be recognized that subject matter is also used as an organizing base for units of work in these programs. The following titles of large units of work selected from curriculum guides for core or block programs illustrate types of content organization used: "Educational Opportunities," "Body Efficiency," "The Adjustment to Natural and Social Forces," "Getting Along with Others," "Conservation of Natural Resources," "Taking One's Place in the World of Work," "Understanding the Development and Meaning of Democracy," "Technological Changes Which Have Affected Our Living," "The American Way of Living Changes as the Sections of the Nation Develop," "It's All One World."

In the practical subjects of the curriculum, such as homemaking, industrial arts, music, art, typing, foreign languages, and the like, the content of the classwork is selected on all four bases—subject matter, life activities of people, interests and past experience, and job analysis. In addition, much of the work of these classes is devoted to the development of psychomotor skills, and content, *per se*, is not the major consideration.

The Senior High School. Classwork in the academic subjects in senior high school is primarily if not exclusively organized on a subject matter basis. And the organizational element of the subject has become more and more the structure of the discipline itself. As is explained in Chapters 5 and 9, the new content developed by national commissions and study groups for the sciences, mathematics, English, and the social studies is selected principally on the basis of structure, with primary attention to the development of concepts, understandings, and generalizations that tie together the content of a subject field.

But some secondary school curriculum workers feel that some of these courses are not appropriate for pupils of below-average or even average intellectual aptitude; hence many schools utilize more traditional bases for organizing subject content in the sections of academic courses that enroll such students. This means that these courses are more factual and descriptive, with content for the subject being selected more extensively on a functional basis that will have practical application to the activities of daily living. But the organizing element is still subject matter and not areas of living, although life activities and to some extent even the needs, interests, and problems of pupils affect the selection of content within a subject matter framework.

In the nonacademic fields, such as homemaking, general business courses, and many aspects of introductory courses in industrial arts and shop courses, life activities, needs and interests of pupils, and job analysis all constitute bases for selecting content. Thus, home economics courses may include units on "Planning Family Finances," "Guiding Children," "Home Decoration," "Personal Appearance," "Food Preservation," and "Looking toward Marriage in the Future." In industrial arts we find such units as "Leather," "Introduction to Electricity and Basic Electronics," and "Mechanical Drawing." Music may include units on "Developing a Knowledge of Voice Classification," "Recognizing Form in Music," and "Appreciating Expressive Qualities in Music."

In the senior high school, as in the junior high school and the elementary school, many of the school subjects also provide learning experiences directed primarily to the development of psychomotor skills, and a number of subjects are offered primarily for this purpose.

In addition, the program of studies of the comprehensive high schools includes extensive offerings of a prevocational and vocational nature. Content in these courses is almost always selected and organized principally on the basis of job analysis, and the requirements of an occupation.

In summary, we see that all four bases for selecting and organizing the content of classwork are used by senior high schools. And in some fields of study several bases may be used in the same subject offering, or different bases may be used for various sections of the same subject course, depending on the characteristics and the postsecondary school objectives of the students.

A Desirable Basis for Organizing Classwork

Now that we have reviewed briefly the methods currently used to organize the classwork of the school, it is proper to consider the question of what constitutes desirable bases. A number of the criteria listed in the "Marks of a Good Curriculum" in the previous chapter pertain directly to the determination of an organization for classwork. Rewording them somewhat for this specific purpose, we propose these criteria for the design of classwork:

The selection and organization of content for the class program of the school should provide units of study that

- are meaningful and significant to the pupils participating in the class activities, and hence likely to elicit a high level of motivation in all pupils (The Criterion of Significance);
- foster changes in behavior and behavior potential that contribute maximally to the realization of the objectives of the school (The Criterion of Relevancy);
- enable pupils to achieve as many behavioral objectives as feasible while engaged in a unit of work (The Criterion of Efficiency);
- constitute the best possible selection of content for this particular group of learners at the particular time of the experience (The Criterion of Worth);
- facilitate maximally further development of behavior potential (The Criterion of Growth);
- enable the teacher to individualize learning experiences as much as possible in programs of school education (The Criterion of Individualization).

On the basis of such a list of characteristics it seems desirable for the staff to use all four modes for selecting and organizing content in various aspects of the school's program. Dewey, in his insightful and thoughtful manner, has provided curriculum workers with some significant guidelines on this matter of content selection:

> . . . there is an intimate and necessary relation between the process of actual experience and education. . . .
>
> The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative. . . . Hence the central problem of an education based upon experience is to select the kind of present experiences that live fruitfully and creatively

> in subsequent experiences. . . . Anything which can be called a study, whether arithmetic, history, geography, or one of the natural sciences, must be derived from materials which at the outset fall within the scope of ordinary life experience. . . . But finding the material for learning within experience is only the first step. The next step is the progressive development of what is already experienced into a fuller and richer and also more organized form, a form that gradually approximates that in which subject-matter is presented to the skilled, mature person.[7]

And this well expresses our ideas on content selection and organization. One point, however, needs to be added. A large body of studies in the psychology of learning and motivation has given the curriculum worker much greater insight into the kinds of experiences and content that may be meaningful and significant to pupils. Some young children, even those in their first or second year of schooling, may find a great appeal and challenge to study abstract bodies of subject matter that lead on from firsthand experience at the outset. The discussion of readiness in Chapter 6 considered the great variability among children in their capacity to undertake various kinds of learning experience, and of new conceptions by educators of what may be meaningful and understandable to children at various ages.

Bruner, a psychologist who in recent years has given curriculum workers many thoughtful concepts on education, says much the same things that Dewey expressed several decades previously:

> . . . at each stage of development the child has a characteristic way of viewing the world and explaining it to himself. The task of teaching a subject to a child at any particular age is one of representing the structure of that subject in terms of the child's way of viewing things. . . . What is most important for teaching basic concepts is that the child be helped to pass progressively from concrete thinking to the utilization of more conceptually adequate modes of thought.[8]

We repeat, therefore, that a good curriculum plan for the classwork of the school, kindergarten through high school, will make use of all four methods of selecting and organizing the content. But the extent to which each method is used at each level of schooling will vary greatly, and the type of organization used at any one level will vary from subject to subject. For example, much of the content used in the primary grades will be organized on the basis of concrete things or events with which many of the children are already familiar, of matters of personal interest to them, or of things which may be brought within their overt experience. But the teacher will often generalize experience, build concepts, and develop understandings fundamental to the eventual organization of subject matter into a logical structure.

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[7] Dewey, *op. cit.*, pp. 7–87, *passim.*

[8] Jerome S. Bruner, *The Process of Education* (Cambridge, Mass.: Harvard University Press, 1961), pp. 33–38, *passim.*

On the other hand, much of the content studied by high school students will be organized on a logical basis that utilizes the structure of the field of knowledge, basic strands, themes, or elements that inhere in the content itself. Such an organization will be used in history, the sciences, mathematics, and the like. But a school faculty will also want to provide some courses and activities for high school students in which content is principally organized around life activities or areas of living or personal problems and concerns. Such a mode of selection and organization may be used in homemaking courses, group guidance classes, modern problems courses, general business subjects, and so on. A job-analysis organization will be used in part in prevocational and vocational subjects; in other courses content may be selected simply to develop psychomotor skills without relation to function.

The responsibility facing the curriculum planner is to make certain that appropriate methods of selecting and organizing content be used so that the education of the children results in growth and development that enable them to realize the full potential of their capabilities. Learning experiences must have direction, they must provide for further growth, they must lead to the realization of desired objectives, and they must enable each pupil to realize his own potential.

THE CORE AND BLOCK-OF-TIME PROGRAMS

The term "core" is a familiar one to curriculum workers, and the concepts embodied in this construct have significantly influenced educational developments in this country since the 1930's. Many secondary schools have made provisions for a core or a block program in their curriculum plans. In a consideration of the class program of the school and of the selection and organization of content, we should examine the characteristics of these programs and understand their use in secondary schools.

Characteristics of Core and Block Programs

In the early years of these programs—in fact, until about 1945—the term "core" designated both a type of class program and an administrative arrangement for schooling children. Curriculum workers of that day clearly understood that a core program in a school meant the elimination of certain required school subjects and the substitution of a new integrated type of class program that utilized a different kind of organization of content. But in the 1930's the term "core" also meant and still does mean an administrative arrangement in the secondary school in which some pupils remain together as a class for one third to two thirds of the school day, usually with the same teacher, although several teachers might work on a team basis with several core groups. The remainder of the day is devoted to a study of subjects of the traditional type, including disciplinary, practical, and functional courses.

In the core class of the pre–World War II period, content was usually organized on the basis of either areas of living or the needs, interests, and problems of pupils, described and illustrated in Chapter 5. Thus pupils in the core curriculum program worked on units of classwork designated by such titles as "Conserving Our Forests," "Dating," "Securing and Maintaining World Peace," "Manners and Etiquette," "Why Do I Behave as I Do?" and so on for the whole gamut of either problems of living or personal needs and interests.

By the middle of the 1940's a great deal of criticism from parents of children enrolled in core programs, from the pupils themselves, and from teachers—both those teaching core classes and those teaching subjects—was voiced. The criticism was usually directed at the units of study selected for development and the time consumed in core, which, because it constituted so much of the required program of the secondary school, drastically reduced the opportunity for pupils to take academic subjects. Usually English and the social studies were the subjects replaced by core programs, but in the three- and four-period cores mathematics and science were also often absorbed.

Many school systems having core programs have recognized the educational advantages of having pupils work with a teacher for a longer block of time than the usual 40–55-minute class period, but dissatisfied with units of study based on areas of living or needs, these systems have retained the longer block-of-time arrangement while changing the classwork to a subject organization. To convey the nature of this new arrangement and to avoid misconceptions among parents, teachers, and students because of the stereotype of core resulting from the earlier programs, most schools adopted the term "block-of-time," thus placing emphasis on the administrative arrangements rather than on the units of study.

The content for the block consisted of subjects, pure and simple. In most schools the block extended for only two secondary school periods, and two subjects were included, usually English and one of the social studies, but in others a block included mathematics and science subjects. Often good teachers in block programs integrated the content usually developed in these subjects, and sought to attain a broader range of behavioral goals than is expected when each subject is taught separately. But many block teachers had difficulty in correlating the content of two subject fields; hence the single-subject organization was retained, with the teacher devoting a period to each.

At the present time we believe it is in conformity with practice and with the views of most educators to regard "core" and "block-of-time" as synonymous, and to define them as an administrative arrangement for scheduling general education classes in the secondary school that holds a group of pupils together for two or more class periods, usually with the same teacher. Terms used to designate mode of content organization are applicable for describing what goes on in the core or block program—"subjects," "unified subjects," "social problems," "persistent life situations," "areas of living," "needs, interests, and personal problems" being appropriate. However, as pointed out earlier, the subject design is used almost exclusively. Note that we do not apply the terms "core" or "block" to programs in vocational education or to specialized subjects in which pupils remain in the same group with one teacher for two or more periods.

Present Status of Core and Block Programs

Elementary Schools. In educational circles, neither "core" nor "block-of-time" is applied to elementary school programs, although practice in most of these schools is to have one class group of pupils remain together with a teacher for the entire school day, or for at least a major portion of it. Chapter 10 will present these plans. We speak of "self-contained classrooms" or "platoon programs," but not "core" or "block programs." But the self-contained classroom or even a half-day platoon program offers the same advantages as that claimed for the longer period arrangement in the secondary school.

In practice, a curriculum worker determines what administrative arrangements are best at each school level for attaining most effectively and completely the aims of the school, with no thought of imposing a common organization or design on all schools. Thus the elementary school has not followed blindly any plan instituted for the secondary school, and vice versa.

Secondary Schools. During the heyday of core programs, only a very small proportion of the secondary schools of the country adopted the plan. No status studies were made during that period, and even studies made at a later date, when block-of-time programs had replaced most of these core programs, reveal only limited use of either type of program in the schools. Moreover, these studies illustrated two difficulties in determining status—clarity of definition and the reliability of school administrators in reporting in terms of definitions made. Wright made a valiant effort to survey the situation, and her study is helpful.[9] Studies of core and block development in individual states have also been made.[10]

In the mid-1960's our opinion is that few core or block programs exist in four-year or senior high schools. On the other hand, block programs have won wide acceptance in the junior high school but are usually limited to the seventh grade. Some junior high schools, however, do have blocks in the eighth grade, and a few have them in the ninth grade.

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[9] Grace S. Wright, *Core Curriculum Development: Problems and Practices* (U.S. Office of Education Bulletin 1952, No. 5; Washington, D.C.: Government Printing Office, 1952).

[10] Nelson L. Bossing and John F. Kaufman, "Block-Time or Core Practices in Minnesota Secondary Schools," *Clearing House,* 32:532–537 (May, 1958); and State Department of Public Instruction, *The Status of Block-Time Programs in Michigan Secondary Schools* (Bulletin No. 426; Lansing: The Department, 1960).

In a transitional period in education, such as characterized the late 1950's and the early 1960's, when many developments in the school curriculum which could be labeled as "progressive education" by critics of school practice were subjected to attack, block-of-time programs in the junior high school gained in public and professional esteem because of the recommendations of James B. Conant in his widely acclaimed reports on American secondary education. In his recommendations for the junior high school he states: "To my mind, there should be a block of time set aside, at least in grade 7, in which one teacher has the same pupils for two or more periods, generally in English and social studies. Otherwise, grades 7, 8, and 9 should be departmentalized."[11]

It should be added that he recommends a block program only for grade 7, although he states that he would not object to it for grade 8, but would for grade 9: "The block-time teaching I am discussing need not break down subject-matter lines. . . . I must make it plain that my advocacy of block-time teaching does not presuppose an endorsement of core teaching."[12] With support for block programs from such an influential source, it seems accurate to state that these arrangements, using a subject design, will continue to be used extensively in the junior high schools, possibly with the addition of a team-teaching plan in some schools.

PLANS FOR EXTRACLASSROOM ACTIVITIES

As we have stated previously and as is shown in the model (Figure 9), some of the curriculum experiences for pupils are provided outside the organized class program of the school. This is particularly true in the secondary schools. No highly descriptive term has been coined for these aspects of the curriculum, so educators commonly designate them as "extraclassroom activities," "extracurricular activities," or "co-curricular activities." We prefer the first term. They are units of experience of the curriculum that are not included in the formal class program; in the secondary school they usually do not carry credit in the same sense or on the same basis as courses. Most teachers are familiar with the program, either as a sponsor or as a participant when he was a secondary school pupil.

In secondary schools, both junior and senior high schools, the extraclass activities constitute an important part of the total educational program of the school and hence a part of the curriculum plan. In elementary schools the distinction between the class program and the extraclass program is usually not made, except for school-wide activities, such as a pupil council, a school chorus or instrumental music group, school service groups, or youth-serving organizations.

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[11] James B. Conant, *Education in the Junior High School Years* (Princeton, N.J.: Educational Testing Service, 1960), p. 22.

[12] *Ibid.*, p. 23.

An examination of curriculum guides, programs of studies, and similar curriculum materials, and a knowledge of school practice indicate that school faculties seldom consider the extraclass activities in organized programs of curriculum planning. About the only place in which one may find any reference to the activities or even a list of them is in a handbook for high school students, and that is likely to be merely a brief description of the activities and the basis for participation. Faculty planning of the kind done for the class program of the school is indeed meager. Yet extraclass activities comprise a substantial portion of the total learning experiences provided secondary school pupils. Surely such an important aspect of the educational program deserves thoughtful and careful planning; otherwise the precious moments of children growing up may be squandered and the energies and efforts of teachers and the resources of the school may be wasted.

Steps in Planning the Extraclass Program of the School

The sole justification for the extraclass activities program of any school is the contribution it makes to the realization of the objectives of education. Obviously, the most important and the first step in developing the plan for the activities program is to identify the objectives of education to which specific activities may contribute in a significant and effective manner. The curriculum planner, that is to say, starts with the objectives of the school; too frequently, especially in the senior high school, the activities to be sponsored are selected and then, belatedly, some effort may be made, often rather ludicrously, to ascertain what educational ends the activity may serve. And the fit is not always good.

On the other hand, teachers and administrators know that some of the most significant and meaningful learning experiences the school can provide for the realization of important and accepted goals of the school are provided by the out-of-class activities of pupils. Objectives in the affective domain, such as the development of attitudes, values, character and personality traits, ways of working with people, behavior, commitments, and relationships with fellow students, may often best be served by the activities program, provided it is planned and carried out to achieve these outcomes.

The second step, of course, is to select the types of activities or the specific activities that offer promise of achieving these objectives most efficiently and meaningfully. Specific objectives should be assigned to each activity. As is true of the class program, many of the basic objectives, especially in the affective and psychomotor domains, may be well served by a number of activities. And this is good, for pupils will usually participate in only one—or at most two or three—of the organized activities.

The third step in developing the plan for the extraclass program is to prepare a curriculum guide or a handbook for teachers that will state the purposes and the place of activities in the educational program of the school, list and describe the activities that would be appropriate for sponsorship by the school, and specify the principal pupil outcomes to be sought in each activity. Suggestions for learning experiences that may be carried out by participants, similar to such lists to be found in resource units prepared for the class program, should also be included in the guide.

Types of Extraclass Activities

Activities vary greatly in purposes, scope, program, procedures, and outcomes. A broad classification may be helpful in planning the program in a school:

Activities ancillary to the class program. Many of the school clubs are subject offerings. Examples are writing, science, mathematics, agriculture, trade, language, homemaking, business, art, music, and history clubs. Others, such as photography, international relations, current events, and crafts clubs, are related to subject fields but go beyond the class program or draw on a number of areas for content. Clubs of these types are primarily concerned with subject matter, often using course content extensively in carrying on their projects. Many of the clubs, particularly those related to functional and practical school subjects, are concerned with life activities and the needs and interests of the pupils themselves.

Activities for developing special interests and talents. Although most of the extraclass activities of a school provide opportunities for developing special talents and capabilities, some are organized primarily for that purpose. These include dramatics and debating clubs or organizations, the school newspaper and yearbook, Audubon clubs, Civil Air Cadets, the Future Teachers' Club, 4-H clubs, music groups, and hobby clubs of many kinds. The program of the club is oriented to the pursuit of personal interests and not primarily to the mastery of subject matter content.

Activities for rendering service to the school. Other activities include the student or pupil council of the school, booster clubs, safety and traffic control groups, the honor society, lettermen's club, pep club, student welfare groups, projector's club, stage crew, ushers, hall duty, reception and visitors service, playground and lunchroom supervisory groups, and the like. These groups contribute to self-development and to personal enjoyment.

Activities for enhancing spiritual or moral development. Many schools sponsor Hi-Y, Tri-Hi-Y, Girl Reserve, Allied Youth, Junior Red Cross, Boy Scouts, Girl Scouts, Campfire, CYO, and many similar groups.

Social and recreational activities. School parties and dances, GAA, chess club, and similar groups play an important role in the development of a well-rounded individual.

Athletics and sports. Athletics and sports also provide experiences that will contribute significantly to the attainment of objectives, which is their function. But objectives must be deliberately and overtly sought; hence the necessity for planning. Let us hope that teachers and other curriculum workers will undertake much more extensive planning of these activities in the years ahead so that maximum educational value will result.

PLANNING THE SERVICES OF THE SCHOOL

The services a school provides its pupils should be regarded as another part of its educational program. These include

Guidance and counseling services
Health services
Food services
Transportation services
Library services
Services for exceptional children and youth

Planning the contribution which each of these services will make to the attainment of educational objectives is an essential and necessary part of the process of curriculum development. These services, in sum, constitute major undertakings of a school system: not only do they facilitate and contribute to the education of pupils; the services themselves are educative. Their contributions to the achievement of the objectives of the school should be deliberately planned and sought by the school staff, both the professionals and the nonprofessionals. In many school systems, these services are regarded as merely service units and not educational activities. Except for the guidance and library services, and to a lesser extent the special services rendered exceptional children, school faculties are seldom asked to participate in planning educational experiences that may be provided by these service units of the school. Again, it seems essential that thoroughgoing and comprehensive curriculum planning include consideration of the educational objectives that may be achieved through these parts of the educational program.

OTHER ASPECTS OF THE CURRICULUM PLAN

Our model (Figure 9) lists two other aspects of a curriculum plan: the social life and interpersonal relationships of the school, and the organization of the school for instruction. Both are important aspects of curriculum planning and both contribute to the realization of school objectives. Instructional organization will be considered in Chapter 10; hence no further treatment of this aspect of curriculum planning will be given here.

In their curriculum planning some school systems give a great deal of attention to the characteristics of the group life of pupils and teachers as they work together; others give only incidental consideration. Guides for instruction in the kindergarten and primary grades usually contain the most detailed suggestions and plans, whereas little if any consideration is given to group relationships in the senior high school. However, suggested learning activities and ideas for developing units of work inevitably deal with individual and group experience and, hence, indirectly human relationships. But more thought should be given to the role of the teacher as a model-person, to the building of morale among pupils, to the gratification of the egocentric needs of pupils, and to the role of the teacher in the development of motives, self-concepts, and aspirations. Many of these, of course, are aspects of teaching, and hence are a part of the development of a strategy for teaching. Much fuller treatment of these topics will be found in books on the teaching-learning process, which is beyond the scope of this book.

Human relationships between teachers and pupils in a school are too important to be left to chance or to spur-of-the-moment impulses. Of course, no one would suggest that teachers surrender their individuality, or that both teachers and pupils engage in sham or insincere behavior just to carry out the suggestions of a curriculum guide or a pamphlet on classroom behavior. No one wants a teacher to have three faces or even two. But we do suggest that in its curriculum planning the staff consider the ways in which teachers and pupils may best work together in groups or in person-to-person relationships for the enhancement of the character and personality development of pupils. Research in human behavior has given us ample findings on the influence an adult person who serves in the role of a model-person exerts on the behavior of children and youth. And the teacher is indeed a model-person of great stature, either of a positive kind that furthers desirable development or of a negative kind that perhaps sets undesirable patterns of behavior as models or produces rebellion, frustration, anxiety, and tension.

And similarly among the pupils themselves. The relationships of a pupil with fellow students foster attitudes, sentiments, and behavior patterns that constitute desirable or undesirable learnings. The influence of a group on its members has been well documented.[13]

INTEGRATING AND UNIFYING THE CURRICULUM

We have discussed the various aspects of the school's curriculum, but an important task still remains—correlating these parts into a unified and integrated program of education. Seldom has this job been done well or adequately in curriculum development projects. Goodlad is especially critical of the situation after analyzing new curriculum projects: "The task of putting all the pieces together into a complete and reasonably unified school program has remained almost untouched."[14]

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[13] George C. Homans, *The Human Group* (New York: Harcourt, Brace & World, Inc., 1950); and Bernard Berelson and Gary A. Steiner, *Human Behavior: An Inventory of Scientific Findings* (New York: Harcourt, Brace & World, Inc., 1964), Chap. 8.

Integration of curriculum experiences has two aspects: horizontal, that is, the various parts of the curriculum in which a pupil engages at any one time in his school life; and longtitudinal or vertical, or the units of learning experiences presented in successive stages of his education, day by day and year by year. Furthermore, from the standpoint of the pupil, integration has two aspects: personal integration of experience by the learner himself; and the manipulation of experience by an outside agent (in school, the teacher and other staff members) so that, in the presumption of the manipulator, integration of experience will be facilitated.

Obviously, each individual must unify and correlate his own body of experience; he alone can do this. And the skills and abilities to integrate experience can be taught within the limitations of the capabilities of the person himself. But in the consideration of the plan for the curriculum, the subject matter of this chapter, our concern is primarily with the selection and organization of experience by the curriculum planner so as to facilitate integration.

The educator may enchance the integration of experience by pupils in several ways: by defining the outcomes sought through curriculum experiences; by selecting the bases for the organization of content for the realization of desired outcomes; and by selecting the appropriate content. In sum, then, we turn again to the same basic aspects of curriculum planning itself to undertake the facilitation of integration of experience by the pupils.

Facilitating Integration by Definition of Objectives

Inasmuch as the determination of the outcomes to be sought through school experience is the most basic of all aspects of planning, this process also constitutes the principal method by which integration is to be fostered. Assume, for example, that a school system has stated the following as a desired outcome for pupils: "Organize material which is to be presented in written or oral form into a meaningful sequence of ideas and put them into reasonably good sentences and paragraphs." This laudable aim indicates to each member of the faculty that he should help his pupils use correct and accurate English in his written work. This is a responsibility of the kindergarten teacher and all other teachers in the elementary school, the agriculture teacher, the science teacher, the social studies teacher, the homemaking teacher, and all other members of the secondary school staff. Ideally, a pupil will then recognize that good English usage is expected in all his written work; and so in his other classes he uses what he has learned in his English class. Integration on both the horizontal and vertical levels is facilitated.

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[14] John I. Goodlad, *School Curriculum Reform in the United States* (New York: The Fund for the Advancement of Education, 1964), p. 65.

Again, assume that the school system has stated as an objective "To understand the interdependence of the people of the world and to act appropriately in our relationships with other persons." The curriculum guide may recommend that the pupils of the kindergarten teacher learn about and discuss the work of the postman, the policeman, the grocer, the farmer, and other types of workers; at a much later level, the guide may suggest that the American history class read about and discuss the efforts of the federal government to promote and maintain peaceful relations among the nations of the world. If these two units of work, and many intervening ones, have been tied together in a spiral of ever-expanding study of the interdependence of people, longitudinal integration of the curriculum would have occurred.

If objectives have been clearly defined, and have been fully accepted as constituting the proper base for planning the curriculum, the educational program can best be planned to provide a unified body of content and activities.[15]

Facilitating Integration by the Organization and Selection of Content

The methods of organizing curriculum experiences and content, discussed in Chapter 5, also constitute bases for facilitating the integration of experience. If the organizational base is subject matter, then the logical organization of each subject becomes a vehicle for unifying the units of study. Thus the development of the concept of functional relationships between things or events becomes a method of unifying the study of mathematics. The multiplication and division of numerical quantities, beginning with the simplest of numerical symbols in the elementary grades through complex expressions of quantities in advanced algebra, is a method of unifying a set of learnings. Structure and logical order is a method of integrating school experience.

If, on the other hand, the method of organizing and selecting curriculum content is based on the life activities of people, the unification of the curriculum is sought through a spiraling study of these life activities from the kindergarten through high school. For example, assume that one of life's major activities selected as an organizing theme in the school's program is "Conserving and Improving Material Conditions," children in the kindergarten may engage in experiences to beautify their classroom; in the upper grades they may visit a conservation district in the country to observe and study conservation practices; in the high school, a class may discuss the use of atomic power as a method of providing electricity to regions devoid of natural resources for the production of energy.

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[15] The chapters by Troy Organ and C. Robert Pace in *The Integration of Educational Experiences,* 57th Yearbook, Part III, National Society for the Study of Education (Chicago: University of Chicago Press, 1958), expand and extend this treatment.

Similarly, a curriculum organized on the basis of personal needs, concerns, and interests may use "The Development of a System of Values" as an organizing theme. Such a theme could be used to unify classwork from the kindergarten through high school.

In school practice, it is apparent that the organization and structure of curriculum content is the principal method by which schools seek to facilitate the integration of learning experiences by pupils.[16]

Formal evaluative procedures used by the school often force pupils to integrate learning to a greater or lesser degree, depending on the nature of the devices used. Tests may require pupils to draw on a number of fields of study for satisfactory responses; cumulative projects at the termination of a unit of study may tie together content, skills, and understandings from a number of subjects. A broad school-wide evaluation of pupil outcomes may not itself result in integration as much as it reveals to the staff the extent to which integration has occurred.

Achieving Integration

Although a well-planned curriculum will not ensure the integration of learning for individual pupils (only they themselves can integrate their own experience), curriculum planning can facilitate it. Piecemeal approaches to planning, entrusting the planning of bits of the curriculum to different agencies, groups, or individuals or neglect of basic factors in the selection of curriculum experiences is almost certain to make integration more difficult. Goodlad, in assessing some of the significant curriculum planning projects of the 1960's, says:

> The current curriculum reform movement has refurbished shockingly outworn courses and has given us a fresh way of approaching various subject fields. . . . But planning from the top down has in some instances brought with it a straitjacket, a straitjacket that is incongruously ill-suited to childhood schooling. A really significant reform movement, therefore, looks ahead to a time when the curriculum will be planned from the bottom up, with knowledge of students and their achievements built into the sequence of subject matter in the curriculum design.[17]

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[16] See Benjamin S. Bloom and Ralph W. Tyler for a more extensive treatment of curriculum organization as a method of promoting integration *ibid.*

[17] Goodlad, *op. cit.,* p. 59.

Good curriculum planning is possible only when all the teachers and other educators responsible for the education of children throughout their period of schooling from kindergarten through high school (and, hopefully, through the general education program of the college years) work together to make certain that curriculum plans take proper and adequate account of all the basic factors that enter into the making of curriculum decisions. The plans may then be given body and substance by groups of individuals who have the needed competencies to develop particular parts of it, and who understand the relationship of their particular endeavor to the total program of education already envisioned.

FOR FURTHER STUDY

DOUGLASS, HARL R., ED. *The High School Curriculum.* 3rd ed. New York: The Ronald Press Company, 1964.

In these thirty-three chapters various aspects of curriculum planning are treated and curriculum plans for each major subject field are presented.

DOWNEY, LAWRENCE W. "Secondary Education: A Model for Improvement," *School Review,* 68:251–265 (Autumn, 1960).

Discusses the factors that must be considered in searching for new knowledge in education and in seeking improvement in schools. The author then presents a model based on these factors.

DRESSEL, PAUL L., CHM. *The Integration of Educational Experiences.* 57th Yearbook, Part III, National Society for the Study of Education. Chicago: University of Chicago Press, 1958.

An excellent series of chapters on basic procedures for developing the school's curriculum. In discussing the problems of developing integration, many aspects of curriculum planning are treated in a fundamental manner.

GOODLAD, JOHN I. *School Curriculum Reform in the United States.* New York: The Fund for the Advancement of Education, 1964.

After describing some of the principal national curriculum development projects of the period, Goodlad concludes with an analysis of problems and issues in curriculum development and his thought on the current state of affairs and recommendations for future planning. An important statement on the development of curriculum plans.

———. "Three Dimensions in Organizing the Curriculum for Learning and Teaching," in Vincent J. Glennon (ed.) *Frontiers of Elementary Education: III.* Syracuse, N.Y.: Syracuse University Press, 1956.

Presents a model of curriculum planning based on concepts, content, and children. Considers in detail the process of planning.

HALVERSON, PAUL M. CHM. *Balance in the Curriculum.* 1961 Yearbook, Association for Supervision and Curriculum Development. Washington, D.C.: The Association, 1961.

Considers the problems of providing a balanced educational program for pupils. Issues are analyzed and methods are suggested.

LOUNSBURY, JOHN H., AND JEAN V. MARANI. *The Junior High School We Saw.* Washington, D.C.: Association for Supervision and Curriculum Development, 1964.

Describes the school experiences of pupils in typical school situations. Illustrates the curriculum actually provided pupils, regardless of a plan.

LYDA, WESLEY J. "A Suggested Conceptual System for Decision-Making in Curriculum Development," *Educational Record,* 41:74–83 (January, 1960).

Discusses eight essential aspects of a conceptual system for planning a curriculum. He believes that such a system gives direction and unity to decision making.

PROJECT ON THE INSTRUCTIONAL PROGRAM OF THE PUBLIC SCHOOLS. *Deciding What to Teach.* Dorothy M. Fraser, writer. Washington, D.C.: National Education Association, 1963.

Chapters 4, "What Shall Be Included in the Curriculum?" and 5, "Establishing Balance and Priorities," consider topics pertinent to this chapter.

"Student Activities in Today's Secondary Schools," *Bulletin,* National Association of Secondary-School Principals (No. 294), 48:1–87 (October, 1964).

This special issue contains a number of articles on the extraclassroom program. The lead article on a rationale for the activities program is especially noteworthy.

UNITED STATES OFFICE OF EDUCATION. *Programs for the Educationally Disadvantaged.* Bulletin 1963, No. 17. Washington, D.C.: Government Printing Office, 1963.

An excellent series of papers presented at the conference on the education of disadvantaged children. Describes programs in a number of school systems, including the famed Higher Horizons Program of New York City schools. These programs illustrate ways in which curriculum plans are adapted to pupil needs and characteristics.

CHAPTER 9

Developments in the Subject Fields

As noted in Chapters 5 and 8, the traditional subject design of the curriculum has become even more dominant during the middle years of the twentieth century. To a very considerable extent the subject fields or "disciplines," as they have been called by many, have long defined the framework of the curriculum. Beginning in the late 1950's, however, the tasks of curriculum planning in regard to the subject fields became much more complex as well as much more challenging. No longer can curriculum planning committees and leaders assume that time-honored sequences in a particular subject—nor, indeed, its purposes and content—are simply to be added to or brought up to date in accordance with new textbooks, tests, and courses of study.

The greatly heightened national concern for education, the information revolution, and other factors have brought about many proposals, national studies, and widespread experimentation in various subject fields, as well as much concern about fields which at first were relatively untouched by federally subsidized research and extensive experimentation. This book is being written even as most of these developments are in process, and their results and impacts on the school curriculum cannot be adequately assessed. Nevertheless, we believe that any comprehensive treatment of curriculum planning should describe the present situation in the subject fields, indicate emergent emphases, and annotate seemingly significant curriculum studies and other developments. This chapter is intended to help interpret these developments, and especially to indicate the many appropriate references to which curriculum workers and students can turn for more detailed information on individual developments.

FERMENT IN THE SUBJECT FIELDS

Many professional organizations had curriculum committees actively at work in conducting studies and preparing reports in the various subject fields during the first three decades of the twentieth century and even into the 1930's. Thus, there were the influential reports of such groups as the National Committee on Mathematical Requirements (1920–1923), the Classical Investigation (1921–1925), the Modern Language Study (1923–1931), the Commission on the Social Studies (1929–1933), the Curriculum Commission of the National Council of Teachers of English appointed in 1929 and reporting in 1935. In 1932, the Progressive Education Association organized its Commission on Secondary School Curriculum which prepared numerous reports—published beginning in 1938 with the last one in 1940—*Science in General Education, Language in General Education, Mathematics in General Education,* the *Social Studies in General Education,* the *Visual Arts in General Education, Literature as Exploration,* in addition to those on other topics. From about 1940 to about 1960, however, no such national committees as these were publishing such extensive reports and proposals, with the exception of the work of the Curriculum Commission on the Language Arts of the National Council of Teachers of English. There were, of course, committees at work in the professional organizations, but the preoccupation of the United States and the schools with World War II, and therafter with enrollment and physical rather than curriculum problems, seemed to preclude the extensive efforts common in the earlier decades to maintain an up-to-date curriculum and to improve the teaching of the subjects. During the 1940's and the early 1950's, until national defense problems reawakened interest in some curriculum areas, most major curriculum studies cut across subject lines, emphasizing major curriculum objectives, youth problems, and other curriculum concerns rather than the subject fields themselves.

The re-evaluation of America's military, scientific, and national defense position, touched off by the launching of Sputnik in 1957, greatly intensified and accelerated evaluations of what the schools were teaching and should be teaching. Representing the national interest, the National Science Foundation, established by Congress in 1950 as an agency of the federal government for the support of research and education in the mathematical, physical, engineering, biological, and medical sciences, and in selected areas of the social sciences, became the primary sponsor and supporter of curriculum development and also in-service teacher education in science and mathematics. James R. Killian, Jr., of the Massachusetts Institute of Technology, who had served the federal government in various leadership roles in science programs, noted in 1964 that "in the area of curriculum improvement in the sciences—the disciplines which have pioneered the reform movement—the National Science Foundation has been the principal source of support."[1] In elaborating the point, he reported these facts:

> Since 1959 it has been making grants toward this end of over $6 million annually. It has supported over 130 individual projects ranging from mathematics for kindergarten children to solid mechanics for university graduate students, and in size from production of a single teaching film or a one-week curriculum study conference to full-scale "critical mass"

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[1] James R. Killian Jr., "The Return to Learning," in Robert W. Heath (ed.), *New Curricula* (New York: Harper & Row, Publishers, Inc., 1964), p. 260.

> efforts, like the PSSC physics course and those being prepared by the School Mathematics Study Group and Biological Sciences Curriculum Study, all of which have taken four to five years to complete at a cost of between $4 and $5 million. The National Science Foundation is also spending about $35 million a year for the all-important teacher-training institutes, to give both school and college teachers in the sciences better grounding in their subjects.[2]

Also reflecting the national concern for curriculum improvement, the 1958 National Defense Education Act provided substantial federal subsidy for several types of expenditures to improve the fields of science, mathematics, and modern languages, and also to strengthen guidance services and the use of various media.

Thus, the years since 1957 witnessed what we are calling "the ferment in the subject fields." These years have been marked by the appearance of many reports of prestigious national groups as to curriculum needs and changes in their fields, by extensive national studies seeking to provide more current and effective curriculum scope and sequence in the fields concerned, and widespread efforts of state and local groups to incorporate in curriculum planning appropriate ideas and materials from these reports and studies. In June, 1962, the National Education Association's Project on Instruction published a report, *Current Curriculum Studies in Academic Subjects,* which annotated a total of 39 such national reports and projects in the fields of science, mathematics, English language arts, modern foreign languages, and social studies. One year later, the Association for Supervision and Curriculum Development, National Education Association, published a report of the organization's Commission on Current Curriculum Developments, *Using Current Curriculum Developments,* which included descriptions of 46 curriculum projects, 33 studies, and 81 references to source materials, in the same and additional subjects (with, of course, some projects and studies reported in both volumes). The fact that almost all the reports and projects reviewed in these volumes had been initiated since 1957 attests to the extensive activity in the subject fields since that date.

The reasons for the ferment in the subjects may be summarized in the following statements:

1. A general uneasiness about our national position coupled with a certainty as to education's important role in our nation's destiny inevitably focused on the school curriculum, especially the subject fields.
2. The demands for better-trained scientists along with critical comparisions of the status of science, mathematics, and engineering in American and Russsian schools caused critical examination as to where

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[2] *Ibid.*

and how the related disciplines are taught, as well as strong criticism or rejection of any curriculum plans which delayed or tended to put into second place these subject fields.

3. The impetus given to certain subjects, notably science, mathematics, and modern languages, stimulated curriculum planning first in these fields and then in the others which are inevitably competitive for a place in the curriculum sun.
4. The ever-increasing amount of knowledge as well as the frequent changes in knowledge brought about by new research findings, brings forcibly to the attention of citizens and educators the gap between what is known and what is taught.
5. New technological developments, especially educational television, audiovisual aids, and programmed instruction, have been regarded as great resources that permit greater depth in the subject fields and more effective teaching procedures.

COMMON EMPHASES OF DEVELOPMENTS IN THE SUBJECT FIELDS

Some ideas have permeated many of the various developments and much of the literature in the subject fields; they are also revealed in emergent curriculum practices. Several especially relevant emphases are briefly described in the following paragraphs.

A New Relationship of Knowledge and the Curriculum

We have already commented fully in Chapter 5 on the newer interpretations of the role of organized knowledge in the curriculum of elementary and secondary schools. The central, common focus of the new developments in the subject fields is on the selection of basic concepts, principles, and processes—the structure—of the subject, and the most meaningful presentation possible of these materials. Accordingly, new organizing centers, new sequences, and especially new emphases on the skills of continued learning or inquiry tend to characterize the subject developments.

In addition to these major emphases reflecting the modern view of knowledge and the curriculum as discussed in Chapter 5, certain other rather common trends may be identified in the subject field developments of the 1960's. Discussion of these emphases follows.

New Instructional Materials

The most tangible products of the new developments in the subjects are the instructional materials prepared by the various national projects. In addition to textbooks and other materials for pupils, the materials include teachers' guides and a great variety of audiovisual aids. In many projects these materials were prepared by production teams of specialists and classroom teachers, tried out in selected centers, revised following the tryouts, and evaluated further in more extensive use. In fact, it has been rarely if ever possible to concentrate such resources of materials and personnel on curriculum development as has been done in some of the curriculum projects subsidized by federal government grants. Furthermore, the production of instructional materials has been paralleled by extensive in-service education of teachers through the National Science Foundation institutes and other means. Thus the logical process of curriculum revision as envisioned by two influential project leaders has been followed to a considerable extent in many of the subject developments:

> the process of determining the precise boundaries of the educational unit that will be treated;
> the process of identifying the subject matter which is to be dealt with within that educational unit;
> the embodiment of that subject matter in material form, as text, laboratory or classroom materials, and other learning aids; and
> the preparation of teachers in the new subject matter and in the use of the materials.[3]

The Identification and Challenge of the Talented

Since the nation's need for able, trained leadership in many fields was a major factor in stimulating educational improvement in the late 1950's, it naturally followed that much emphasis would be placed on ways and means of identifying and challenging talented youth in the various subject fields. The first intent of many studies and also of reorganized practices in the schools, especially at the secondary level, was to ferret out students with superior ability and provide for them a program of greater depth than the customary one. This purpose has been even more pronounced at the collge level, where the undergraduate courses in many fields are more and more the hunting grounds for the potential scholar in the disciplines concerned.

Certainly, provisions for the academically talented have been sorely lacking in many schools. The emphases on accelerated courses, special courses and seminars, and independent study are undoubtedly helping to meet the need for a larger group of highly motivated and committed scholars-to-be in the major disciplines. In a 1963 article, the director and associate director of the NEA's Project on Instruction cited the following as one of their four concerns about the national studies in the curriculum fields:

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[3] Jerrold R. Zacharias and Stephen White, "The Requirements for Major Curriculum Revision," in Heath, *op. cit.*, p. 69.

> Thus far, the vast majority of the national studies have been geared, consciously or otherwise, to the college-bound or above-average student. While few will question the importance of this emphasis, many would question any assumption that equates a program for them with one for the non-college bound or the disadvantaged student. All students need a core of common knowledge, but the way it is gained may vary widely; hence any tendency to fit all students into a mold created by a particular national study is undesirable.[4]

Some balance between provisions for the talented and those not so talented is probably being achieved by the more recent concern for the disadvantaged student, the dropout, and related categories. Although many provisions for these latter groups are not in the conventional academic disciplines, the fact is that curriculum workers in general are recognizing anew the obligations of the schools to each youth in attendance. Thus the emphasis in the national studies on the academically talented may indeed be regarded as a highly desirable one and especially so when paralleled by adminstrative and instructional procedures seeking to provide well for each learner.

Changing Placement and Sequence in the Subjects

The most obvious trend in regard to placement and sequence of the subjects has been the pushing downward of certain curriculum content. Undoubtedly some of the movement downward has been influenced by the questioning of traditional concepts of readiness. Jerome Bruner has an interesting comment on this change:

> We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. It is a bold hypothesis and an essential one in thinking about the nature of a curriculum. No evidence exists to contradict it; considerable evidence is being amassed that supports it.[5]

It seems likely, however, that much of the changing emphasis is simply due to the pressures of having more to teach and of accelerating the college-bound student, espcially the potential scholar. In any event, the facts as to the changes in placement are clear.

The survey of instructional practices reported in the NEA Project on

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[4] Ole Sand and Richard I. Miller, "Perspective on National Studies in the Disciplines," *Journal of Secondary Education*, 38:30 (January, 1963).

[5] Jerome S. Bruner, *The Process of Education* (Cambridge, Mass.: Harvard University Press, 1960), p. 33.

Instruction's *The Principals Look at the Schools* in 1962 showed as one of the most widespread changes the teaching of a number of subjects at an earlier age. Excerpts of this report follow:

> Nearly one-half of all elementary principals and over one-half of all secondary-school principals reported this trend. In the elementary schools, for instance, during the period from 1956 to 1961, over one-fifth of the schools were teaching certain mathematics courses at lower grades than those at which they had been taught previously. Science, reading, and social studies were also taught in some fashion at an earlier age in the elementary program, although not so frequently as mathematics. . . .
>
> . . . more than one-half of the secondary schools have moved courses to lower years. The downward movement of courses has created room in the curriculum in the upper grades for new, more advanced courses, thus making possible the introduction of material formerly reserved for college freshmen. . . .
>
> A distinct downward movement of subjects to lower age levels has already been reported for the period from 1956 to 1961. At least 55 percent of elementary-school principals and an equal percent in secondary schools believe this will continue. Nine percent of the elementary and 32 percent of the secondary principals marked the "uncertain" column to indicate their expectations for the 1961 to 1966 period.
>
> At the elementary level, mathematics is the subject likely to be most affected, followed by science, social studies, and reading.[6]

Although the movement downward has been perhaps the most dramatic change in the teaching of some subjects, other reorganizations of sequence are quite comprehensive. Thus the "new" mathematics, biology, chemistry, and physics employ very different sequences from those in the traditional courses. The new methods of teaching modern languages have reversed the traditional order of reading and speaking skills. The traditional sequence in the social studies from the near to the distant is being significantly upset by the realities of modern communication and also by growing recognition of the importance of content in the social sciences other than that traditionally emphasized in history, geography, and civics.

A few years ago it was almost possible to lay out, subject by subject, a grade placement of curriculum content in elementary and secondary schools, with, of course, the recognition that alternative sequences were available in many schools. At the present time, we would not dare to offer such a chart because there are so many alternative patterns and so many schools in the process of partial or full transition from the traditional to the newer placement and sequences. This situation is not one to be deplored, we believe, but rather one to be encouraged in the fervent hope that curriculum planning groups will maintain continuing studies of what placement and sequences fit best in their respective situations. Certainly the situation is one that necessitates as well as challenges serious and continuing investigation, evaluation, and diffusion of promising curriculum innovations.

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[6] Project on the Instructional Program of the Public Schools, *The Principals Look at the Schools* (Washington, D.C.: National Education Association, 1962), pp. 5–6, 37.

NATIONAL STUDIES IN THE SUBJECT FIELDS

We have already cited in this chapter two publications which give some specific information about various national studies in the curriculum fields under way in the early 1960's. The first of these to appear was the NEA Project on Instruction's report, *Current Curriculum Studies in Academic Subjects*, which annotated 39 studies, reports, and position papers in the fields of science, mathematics, English language arts, modern foreign languages, and social studies.[7] This volume appeared in June, 1962, and twelve months later the Association for Supervision and Curriculum Development, National Education Association, published the volume prepared by its Commission on Current Curriculum Developments and entitled *Using Current Curriculum Developments*. The latter report included annotations of a total of 79 reports, projects, and studies in the same subjects as the earlier volume, plus the arts, health education and physical education, and vocational and technical education.[8] A second report updating this latter one was published by the ASCD Commission in 1965. Readers can turn to these sources for specific information about the various national studies they included. Rather than repeat the annotations of the various studies we shall summarize and assess the status of developments in each of the major fields.

It is difficult to distinguish between a "study," a "project," a "report," or a "development." Each of the sources cited include a number of statements by national associations and their committees which in no sense represent research studies. Some of the "studies" did not employ accepted research procedures. The ASCD Commission on Current Curriculum Developments attempted to select for its 1963 volume developments which related to the following criteria, although it was noted that "each project may not conform to each criterion":

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[7] See Dorothy M. Fraser, *Current Curriculum Studies in Academic Subjects*, A Working Paper Prepared for the Project on the Instructional Program of the Public Schools (Washington, D.C.: National Education Association, 1962).

[8] See Robert S. Gilchrist (chm.), *Using Current Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, 1963). See also more extended reviews of selected projects in two 1964 publications: John I. Goodlad, *School Curriculum Reform in the United States* (New York: The Fund for the Advancement of Education, 1964), and Heath, *op. cit.*

1. Is national in scope. (The project is designed for a larger geographical area than a state; should possibly be applicable for use throughout the country.)
2. Has financial support in addition to local and state school funds.
3. Originated with academic and professional groups, although its ultimate publication may be commercial.
4. Was initiated in response to an identified need.
5. Represents a new approach, a new use of materials, a new method, changed content, new objectives, or new grade placement of materials.
6. Is current or has been completed since 1960.
7. Will result (or has resulted) in published materials for pupils (with supporting teacher materials).
8. Fits into or proposes a sequence in curriculum experiences of two or more years rather than an isolated course or unit.
9. Is a developmental program with a duration of three or more years with revisions based on results of tryouts in various schools.
10. Provides for the in-service education of teachers.[9]

In assessing the various fields as to investigations under way, we have been influenced in our comments by these criteria.

The Arts

There has apparently been none of the urgency about curriculum development in the arts as there has been in certain other fields. Although specialists in music and art education, as well as many other educators, have deplored the lack of concern in these fields and some tendencies toward their loss of ground in secondary schools in comparison with the subjects more typically required for college entrance, we are aware of only one national study seeking to emphasize the place of the arts in the school curriculum: the Contemporary Music Project directed by the Music Educators National Conference, National Education Association, and supported by a Ford Foundation grant. This project was planned to use young composers to write music for public secondary schools and also to stimulate enjoyment and creation of contemporary music in the schools. A 1963 statement by the executive secretary of the Music Educators National Conference cited the following expected outcomes of this six-year project (beginning in 1963):

1. Increased emphasis on the creative aspect of music in the schools
2. Creation of a solid foundation and environment for the acceptance of contemporary music and recognition of its importance in music education

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[9] Helen Heffernan and William M. Alexander, "Using Current Curriculum Developments," in Robert S. Gilchrist (chm.), *Using Current Curriculum Developments*, pp. 7–8. Copyright © 1963 by the Association for Supervision and Curriculum Development.

3. Development of a closer relationship and better understanding between the professions of composition and music education
4. Cultivation of taste and discrimination on the part of music educators and students regarding the quality of contemporary music used in the schools.[10]

There has been much research dealing with creativity, and creativity in the arts has a high place in this research. The studies are undoubtedly focusing attention on the identification and education of potentially creative artists. There is growing recognition, too, not only of the importance of encouraging high performance but also of developing a more significant role for the arts in general education, as our nation is giving more importance to the arts. The increasing leisure time to be expected for the majority of our population affords new opportunity for many to participate in a variety of activities in the arts.

To meet these objectives, curriculum planning groups need to solve at least two knotty problems. In the first place, the customary approach to developing appreciations through required courses at the junior high school level is considered inadequate by many educators. Perhaps continued emphasis on the program in the elementary school plus more serious attention to the "extracurricular" activities of the secondary schools would create more serious motivations to continued activities in the arts than brief required courses for all. In the second place, there is definitely needed a loosening of the secondary school curriculum to permit widened and also deepened participation in art and music. Recent tendencies to fill the program of studies of most high school youth with the college-expected courses in other fields make it most difficult, if not impossible, for many interested students to participate in the very areas in which they may have most talent or at least the most interest.

The above statements are supported in part by a 1962 position paper of the National Association of Secondary-School Principals, "The Arts in the Comprehensive Secondary School." In this paper, following a summary of needs and problems related to the arts, the following recommendations were presented:

> The foregoing needs and problems suggest increased emphasis on the arts in junior and senior high schools. No dichotomy need exist between conventional academic subjects and the arts. All subjects are important in the race for human survival and progress.
>
> Neither an outstanding nation nor a worthy individual can be intellectually mature and aesthetically impoverished. School programs should reflect a balanced image of social and artistic values. Every secondary school needs to provide well-trained personnel, adequate facilities, defi-

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[10] Vanett Lawler, "Issues and Developments—Music," *Bulletin*, National Association of Secondary-School Principals (No. 286), 47:50 (November, 1963).

> nite time during the school day, and broad curricular offerings in the arts for all students.[11]

This paper also noted: "Conventionally, arts courses have been required only in the junior high school years" and suggested "systematic contact with the arts needs to be continued for students throughout the years of secondary education."[12]

English Language Arts

Although English, too, did not receive the impetus from the 1958 National Defense Education Act and other large-scale subsidies for research that came first to some other subject fields, this subject has long been under almost constant study by commissions of the National Council of Teachers of English. Its Curriculum Commission had published a three-volume curriculum series in the 1950's: *The English Language Arts* (1952), *Language Arts for Today's Children* (1954), and *The English Language Arts in the Secondary School* (1956). The council continued to carry on its studies in the 1960's, publishing an analysis of problems in the teaching of English in its 1961 report, *The National Interest and the Teaching of English,* which revealed major problems in the teaching of the subject and the preparation of English teachers. A 1963 publication by the Curriculum Commission, *The Continuing Education of Teachers of English,* was a comprehensive treatment of the education of teachers of English for elementary schools, secondary schools, and colleges, and also of the continuing education of teachers of English.

Three other organizations began studies of some significance in the early 1960's. The Commission on English of the College Entrance Examination Board held summer institutes for English teachers at twenty universities in 1962, with planning and follow-up programs in 1961 and 1963, respectively. This commission has also developed varied materials for classroom use and for teacher education. The National Education Association initiated in July, 1962, a three- to five-year English Composition Project, with funds provided by the Dean Langmuir Foundation. This project utilized school centers to investigate effective ways of teaching composition, including the use of theme readers and of writing laboratories. Through its Cooperative Research Program the United States Office of Education began in 1961 a "Project English" which involved universities as centers set up for five-year periods to develop curriculum materials and methods for particular aspects and levels of the English program; six such curriculum study centers were established by January, 1963.[13] By 1965 the Project had expanded to include sixteen curriculum centers, seven demonstration centers, and many small projects. Ianni and Josephs related project activities to three ideas around which they said the new approaches revolved: (1) the inductive teaching and learning of English; (2) the establishment of cumulative steps in the English curriculum; and (3) the interrelationship of literature, language, and communication as unique but interdependent aspects of the one discipline.[14]

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[11] "The Arts in the Comprehensive Secondary School," *Bulletin*, National Association of Secondary-School Principals (No. 275), 46:1–19 (September, 1962).

[12] *Ibid.*, p. 7.

Unlike some developments centering on the secondary level, Project English has included attention to the English language arts in the elementary school; for example, the University of Nebraska Curriculum Study Center undertook a study of composition from the kindergarten through the first year of college. Hopefully, the field of English may receive help sorely needed from research and development activities through this program.

Project English represented the initial post-Sputnik major federal effort to support curriculum improvement in subjects other than those covered by vocational education grants, the 1958 National Defense Education Act, and the National Science Foundation grants. The broadening national interest was clearly demonstrated by the National Defense Education Act amendments of 1964, which added support for "other critical subjects." Thus, under the Title III amendments, English and reading were added to the list of subjects for which NDEA funds can be used to purchase equipment, and under Title XI (an additional title) grants were authorized for support of short-term or regular session institutes to improve the qualifications of various individuals, including those "who are engaged in or preparing to engage in the teaching, or supervising or training of teachers, of history, geography, modern foreign languages, *reading*, or *English* in secondary schools."[15]

Foreign Languages

We ourselves are inclined to believe that the curriculum and methods of instruction have undergone more change in modern foreign languages than in any other curriculum area since about 1950. The situation in the period preceding the 1950's is described as follows (for 1920–1950) by Emma M. Birkmaier in her chapter in the ASCD report, *Using Current Curriculum Developments*:

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[13] See Frances A. J. Ianni and Lois S. Josephs, "The Curriculum Research and Development Program of the U.S. Office of Education: Project English, Project Social Studies and Beyond," in Heath, *op. cit.*, pp. 169–197.

[14] *Ibid.*, p. 173.

[15] Public Law 88–665, 88th Cong., S3060, October 16, 1964, p. 9. Italics supplied.

> During that era, if a modern language were taught at all, tradition, conflicting curricular interests, and an isolationist attitude resulted in a language classroom in which the so-called "reading objective" was paramount. The foreign language was not spoken in the classroom but, rather, talked about and analyzed. The resultant methodology proved inadequate for the nation's needs during World War II.[16]

The inclusion of modern languages in the National Defense Education Act of 1958 facilitated a revolution in the teaching of languages to the now widely practiced audio-lingual approach, which stresses and teaches language as oral communication. The many projects which have been and are being developed at the elementary, secondary, and college levels to accomplish the new developments and the great expansion of modern languages were described as follows by Birkmaier:

> 1. Building a corpus of language designed for teaching purposes in accordance with principles held by linguistic scientists and the learning psychologists
> 2. Utilizing technology to implement the work of the well-qualified teacher, to assist the poorly qualified teacher, and to extend practice time needed to obtain mastery of the skills in listening, speaking, reading and writing
> 3. Determining when (at what age levels) what aspects and skills involved in language learning are best acquired
> 4. Exploiting films and filmstrips to increase cultural understanding and to facilitate learning
> 5. Providing for individual differences through programing laboratory work for a maximum of self-instruction
> 6. Utilizing the staff more efficiently by combining specialists and native informants, by using large group sessions for language analysis and small group sessions for practice and performance
> 7. Reinforcing regular school language study by a session of study abroad, such as Classrooms Abroad or the Indiana University Honors program for high school students[17]

The National Defense Education Act funds have been used to provide language laboratories in the schools, to support summer and year-long modern language institutes for the in-service education of language teachers, and to subsidize the preparation of new teaching materials of a variety of sorts. Coupled with these projects and their results in the schools has been a greatly heightened interest on the part of the general public in the study of a second language or even additional ones. Thus languages have been widely taught in adult education courses, by television, and by language-teaching records. There remain many problems, of course: (1) adequately trained teachers in sufficient numbers to provide a variety of languages in secondary schools; (2) better agreed-upon rationale and policy of offering foreign languages in elementary schools; (3) a more general acceptance of oral communication as a primary objective of instruction in modern languages; and (4) more deliberate programming of foreign language instruction in public school systems so as to avoid breaks in continuity which are so common in the communities where foreign language instruction is somewhat hastily offered as a television course or a special teacher becomes briefly available.

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[16] Emma M. Birkmaier, "Foreign Languages," in Gilchrist, *op. cit.*, p. 25.
[17] *Ibid.*, p. 28.

A highly controversial issue in this field has been the place of foreign languages in the elementary schools.[18] Initially, through the leadership of the Modern Language Association of America and with support from several quarters, foreign language in the elementary school (FLES) has become an increasingly popular curriculum innovation. Generally utilizing the audio-lingual approach, the elementary schools have used various types of instructional programs, including television and recordings, with or without classroom teachers qualified in the language. Perhaps because of the scarcity of qualified teachers as well as the confusion over the purposes of instruction in a second language at the elementary level, the extent to which foreign-language instruction will become fixed in the elementary curriculum remains debatable. Certainly most educators agree that early acquaintance with a second language can be highly advantageous for many children.

We ourselves are inclined to believe that no single study can possibly determine whether or not foreign languages should be offered in the elementary schools or, indeed, in all secondary schools, in the United States. The conditions and factors to be considered are so localized that much more research is needed to help local curriculum planning groups make these decisions. Certainly, continued development of instructional programs and aids is needed to facilitate the expansion of foreign-language instruction that is to be expected and sought. Perhaps some future developments were accurately predicted as follows by a foreign-language specialist addressing a United States Office of Education Conference of state consultants and supervisors of foreign languages, in May, 1963:

> (1) The audio-lingual emphasis is here to stay, but reading and writing, based on prior training in listening and speaking, will regain their importance; (2) use of language laboratories will be made more individualized and flexible; (3) more articulated 6- and 10-year sequences in a language will be offered; and (4) there will be an ever-increasing number of highly competent foreign-language teachers.[19]

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[18] See Harold G. Shane and June Grant Mulry, *Improving Language Arts Instruction through Research* (Washington, D.C.: Association for Supervision and Curriculum Development, 1963), Chap. 9, for a summary of research and arguments on the issue of foreign languages in the elementary school.

[19] Wilmarth Starr, "The Teaching of Foreign Languages: Current Issues and the Future," *School Life*, 46:9–10 (November, 1963).

Health and Physical Education

A national study of possible significance, the School Health Education Study, sponsored by the Samuel Bronfman Foundation in cooperation with the American Association for Health, Physical Education, and Recreation, NEA, was initiated in September, 1961. The first phase of this study was a nation-wide survey (1961–1963) of the status of health education. This survey was followed by a curriculum development project to extend through 1965, aiming to produce curriculum materials.

In his review of developments, Oberteuffer characterized the situation in physical education as one of "confusion of purpose, multiplicity of aims, and eclecticism in program content," noting that "in the minds of many persons, the image of physical education is not a clear one."[20] He also noted the dominance of the physical fitness aim in the physical education program:

> In 1963 it is apparent that the principal theme throughout the areas is that of fitness. How to improve the fitness of youth has become the major question. Some curricula of the day seek nothing but the illusive "physical" fitness. Curricular evaluations have the task of appraising this kind of work in its relation to job growth and development as well as to educational outcomes.[21]

Undoubtedly the chief factor in this emphasis has been the work of the President's Council on Youth Fitness, which has widely promoted its recommendations and materials for strengthening physical fitness programs in the schools.

As we see it, the field of health and physical education lacks comprehensive and detailed analyses to determine its scope, purposes, component parts, and, generally, its place in the school curriculum. What is needed perhaps most of all is coordination and definition of the respective roles of instruction in health education, the physical education program, and the athletic program. Despite determined criticisms of the latter from many quarters, interscholastic athletics maintains high priorities in the total secondary school program, frequently overshadowing all other aspects of physical education and at times, indeed, the entire school program. A 1963 platform statement by the Division of Men's Athletics, American Association for Health, Physical Education, and Recreation seemed to speak for the maintenance of emphasis on athletics, although some principles for its relationship to the total program were suggested.

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[20] Delbert Oberteuffer, "Health Education and Physical Education," in Gilchrist, *op. cit.*, p. 45.

[21] *Ibid.*, p. 46. See also Carl A. Troester, "Physical Education, Health, and Safety," *Bulletin*, National Association of Secondary-School Principals (No. 286), 47:100–105 (November, 1963).

This statement, based on the belief that "participation in athletics should be included in the educational experiences offered to all students in the schools and the colleges of the United States," placed its hope for quality programs in the employment of professionally prepared personnel: "Athletics at every level should be conducted by professionally prepared personnel of unquestionable integrity who are dedicated to the task of developing their charges to the highest degree possible—mentally, physically, and morally."[22] An encouraging and relevant note was cited in November, 1963, by the Executive Secretary of the American Asociation for Health, Physical Education, and Recreation, who noted the widespread concern and activity relative to improvement in the selection and preparation of teachers for the total physical education program.[23]

Although beginnings have been made to focus and regularize practices in health and physical education on basically important curriculum goals, research of a more comprehensive and definitive nature is needed. Meanwhile, this field remains muddled and debatable.

Mathematics

The title of a 1961 publication of the National Council of Teachers of Mathematics fittingly described developments in mathematics education: *The Revolution in School Mathematics.* This title was justified as follows in the first sentence of the text of this publication: "The changes in mathematics in progress at the present time are so extensive, so far-reaching in their implications, and so profound that they can be described only as a revolution."[24] Price suggested as the causes of this revolution (1) research in mathematics, (2) automation, and (3) automatic digital computing machines.

In a 1964 article on "What's New about the New Math?" Strehler answered the title question with the following list of characteristics of the "new" mathematics:

1. It eliminates those topics that are relatively unimportant.
2. It integrates those topics that are important.
3. It introduces recent and important developments in mathematics.
4. It emphasizes the structure of mathematics, rather than isolated topics.
5. It introduces subject matter to students earlier than was previously thought possible.[25]

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[22] Division of Men's Athletics, American Association for Health, Physical Education, and Recreation, *Athletics in Education* (Washington, D.C.: National Education Association, 1963), pp. 1 and 12.

[23] Troester, *op. cit.,* p. 105.

[24] G. Baley Price, "Progress in Mathematics and Its Implications for the Schools," in National Council of Teachers of Mathematics, *The Revolution in School Mathematics* (Washington, D.C.: The Council, 1961), p. 1.

[25] Allen F. Strehler, "What's New about the New Math?" *Saturday Review,* March 21, 1964, pp. 69, 84.

The use of the popular "discovery method" in the mathematics developments was described and justified at a 1963 conference of curriculum project directors and representatives of the Association for Supervision and Curriculum Development:

> The major reason we use the so-called "discovery method" is that it creates interest on the part of the youngsters in what is going on in the classroom. I started with youngsters in the ninth-grade level. A lot of them came into the ninth grade with severe emotional blocks about mathematics.
>
> I felt if I could get the youngsters to discover certain patterns it would be more interesting. They would get more excited in the class. So I used this simple device to evoke interest, and the pupils would leave the classroom happy about mathematics . . .
>
> I have also found that if I give children the opportunity to discover mathematical principles in many contexts, then what they discover lasts for a long time. I have also found that I am able to increase the students' mathematical power when I teach them by the discovery method.
>
> When a child is taught by the discovery method, he becomes accustomed to the fact that the teacher expects him to do something in a new situation without being told what the first step has to be. He does not sit there and say, "I can't do this problem because we never had it before." Under the discovery aproach children develop a great deal of confidence in themselves.
>
> The discovery method is a much more interesting way of teaching.[26]

A host of curriculum projects mostly supported by the National Science Foundation have been undertaken to determine desirable scope and sequence in the mathematics program. Henderson's review of those which met the criteria earlier cited from *Using Current Curriculum Developments* included the following projects:

Boston College Mathematics Institute's Contemporary Mathematics Program
The Developmental Project in Secondary Mathematics of Southern Illinois University
Geometry Project of the Department of Mathematics of Stanford University
The Greater Cleveland Mathematics Program
The Ontario Mathematics Commission of the Province of Ontario, Canada
The School Mathematics Study Group (SMSG)
Studies from Stanford University's Institute for Mathematical Studies in the Social Sciences

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[26] From a statement by Max Beberman of the University of Illinois Committee on School Mathematics quoted in William M. Alexander, *Changing Curriculum Content* (Washington, D.C.: Association for Supervision and Curriculum Development, 1964), p. 6. Copyright © 1964 by the Association for Supervision and Curriculum Development.

Syracuse University–Webster College Madison Project
The University of Illinois Arithmetic Project
The University of Illinois Committee on School Mathematics (UICSM)
The University of Maryland Mathematics Project[27]

Each of these projects has resulted in the development of textbooks and other teaching-learning aids. Illustrative of the nature of some of these projects and perhaps somewhat predictive of their impact is the following statement from the Syracuse University–Webster College Madison Project:

> Because of the resources now being focused on scientific and mathematical education—and even more because of the great need—it can no longer be assumed that arithmetic will be taught in grades 1–8, algebra in grades 8, 9, and 11, geometry in grade 10, and "advanced algebra" or trigonometry in grades 11 and 12. Nor can the development of a high-quality "modern" mathematics program any longer be regarded as mainly a matter of "adopting a new textbook series." Rescheduling school classes, reconsideration of educational philosophy, considerable further teacher education, the introduction of laboratory experiences in mathematics, and less reliance on textbooks all tend to play a role in building a "modern" mathematics program.[28]

As we see it, there are two problems of major importance in the continuing development of the mathematics field. In the first place, there is the overriding problem of curriculum planning in order to put into wise use the new materials in this field. Although a vast amount of in-service education of teachers has already been done and is continuing, the probability remains that many teachers of mathematics will be given new materials or new programs with which they are not familiar. In some cases the new programs are taught as supplements to or are parallel with the old programs they are intended to replace. In the second place, there is the necessity, widely recognized but nonetheless difficult, of preventing a "freezing" of the new mathematics content so that it will not become like the old—obsolescent but almost immovable. These are regarded as central problems for curriculum planning in mathematics as well as in the total school program.

Science

With one important exception, the national studies in science have proceeded very much along the same lines as those described for mathematics. The science studies, too, have been heavily subsidized by the

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[27] Kenneth B. Henderson, "Mathematics," in Gilchrist, *op. cit.*, pp. 51–57.

[28] Robert B. Davis, *A Brief Introduction to Materials and Activities* (Syracuse, N.Y.: Syracuse University–Webster College Madison Project, 1962), p. 1.

National Science Foundation. They have also represented the joint effort of scientists, science educators, and, in some instances, classroom teachers. Studies have aimed at the production of textbooks and other teaching materials. The exception is that the studies in science have tended to be somewhat more splintered among the various science teaching fields than has been true in the somewhat more unified field of mathematics.

The emphases in the science studies have corresponded quite closely to those suggested earlier for the developments in all the subject fields; in fact, it is the science and mathematics studies which have clearly led the search for new structures, content, and method. In a 1962 address Paul De Hart Hurd of Stanford University listed the following criteria for selecting course content in the modern science studies:

1. Provide a logical and integrated picture of contemporary science: the theories, models and generalizations that show the unity of science.
2. Illustrate the diverse processes that are used to produce the conclusions of science and that show the limitations of these methods: the ways of inquiry and the structure of scientific knowledge.
3. Enable the student to reach at some point the shadow of the frontier: to experience the meaning of "We just don't know" and to be aware of the progress of science.[29]

One of the most comprehensive of the science projects has been the Biological Sciences Curriculum Study. In a 1964 description of this project, Bentley Glass of Johns Hopkins University and past president of the sponsoring organization, the American Institute of Biological Sciences, stated that the BSCS program was different in two principal ways from past efforts to improve the science curriculum: (1) The collaboration of research scientists and high school teachers of science and science supervisors in the effort "to replace an antiquated body of scientific knowledge and outlook with subject matter and perspective that are truly current"; and (2) "education in the natural sciences, at least at the secondary level, has assigned the acquisition of scientific information and concepts a place of lesser importance than the understanding of the very nature of scientific inquiry and of the scientific enterprise in which modern man is embarked."[30] Such an emphasis on the "process approach" for primary-grade children characterizes a project sponsored by the American Association for the Advancement of Science and extolled in part as follows at the 1963 Conference on Curriculum Content cited earlier:

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[29] Paul De Hart Hurd, "The New Curriculum Movement in Secondary School Science Teaching," an address at the conference of the Association for Supervision and Curriculum Development, March 6, 1962, p. 5. Mimeographed.

[30] Bentley Glass, "Renascent Biology: A Report on the AIBS Biological Sciences Curriculum Study," in Heath, *op. cit.*, pp. 116–117.

> I am just as convinced as I can be about the soundness of the process approach to education because of the internal truth which it contains about the nature of learning and children and the analysis of content. I think it is a new process of education that we should latch onto and do everything in our power, as educators, to promote. It now has the profound advantage of being sponsored by teams of professional scholars and teams of professional educators working together for common goals and ends. When common goals and ends are agreed upon and procedures are worked out, there is some hope that this time it is going to work properly.[31]

The following curriculum studies for the elementary school were annotated in Blackwood's 1963 review:

The Elementary Science Study (Educational Services, Inc.)
Project on Science Instruction in Elementary and Junior High Schools (Commission on Science Instruction, Washington, D.C.)
The Science Manpower Project, Modern Science in the Elementary School (Teachers College, Columbia University)
University of California Elementary School Science Project
University of Illinois Elementary School Science Project

Blackwood listed the following projects for the secondary school:

Biological Sciences Curriculum Study
The Chemical Bond Approach Project
The Chemical Education Materials Study (CHEM Study)
Chemistry: An Introductory Course
Junior High School Science Project
Physical Science Study Committee
The Science Curriculum: K–12 Approach
Science Curriculum Program of the Science Manpower Project[32]

We see major needs in the science field as the same as those cited earlier for mathematics: the difficulties involved in moving from the traditional program to the new one; and tendencies toward freezing of the new programs too. Hopefully, the same zeal and scientific spirit which have guided the current and recent projects will be sustained in the continuing development of the science field by curriculum planning groups and science educators in general.

There are also significant problems needing further research in science. An example is the uncertainty as to whether there is an optimum time in the school experience of children and youth to introduce even the newer science concepts. The need for relevant research was emphasized in a 1961 publication of the National Science Teachers Association in the following statement:

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[31] From a statement by John Sternig, representing the Commission on Science Education, American Association for the Advancement of Science, quoted in Alexander, *op. cit.*, p. 8.

[32] Paul E. Blackwood, "Science," in Gilchrist, *op. cit.*, pp. 63–67.

> The entire area of the science curriculum is one in which basic research is sorely needed. *Too little is known about the readiness of students for different concepts.* Furthermore, there is need for a better basis for counseling students and for more knowledge about the possibility of handling a variety of students by appropriate course design. To what extent can individual differences be handled by letting students penetrate to different depths and take side excursions if they outrun a common core? Careful studies must point the way.[33]

Social Studies

Although the social studies field is second only to English in the amount of time it occupies in students' programs throughout the elementary and secondary schools, this field has had no such dramatic curriculum reorganization as has occurred since 1958 in science and mathematics. The last comprehensive study of the social studies curriculum made before then was that of the Commission on the Social Studies, sponsored by the American Historical Association and reporting in the early 1930's. Nevertheless, a survey by the Educational Testing Service reported in 1964 found that the frequency of social studies course offerings in both public and nonpublic schools was greater in 1963 than in 1958.[34]

Much has been written about the need for a comprehensive study and reorganization of the social studies program, and some modest efforts to this end have been made. The lack of sustained federal and/or foundation subsidy for curriculum research in social studies has been generally attributed to the extent of separateness in this field. This factor was explained as follows by Fraser in her report for the NEA Project on Instruction, *Current Curriculum Studies in Academic Subjects:*

> One special condition of the social studies field is that, for its content, it draws on seven separate disciplines: history, geography, political science, economics, sociology, anthropology, and social psychology. Many scholars in each of these disciplines, aware of the need for systematic study of their fields at the scholarly level, wish to see the schools provide their discipline with full treatment as a separate subject. Many social scientists find it difficult to recognize the potential advantages for young students of a school subject in which related materials from several of the social sciences are organized into a single program of study. . . . This

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[33] National Science Teachers Association, *Planning for Excellence in High School Science* (Washington, D.C.: The Association, 1961), p. 49.

[34] Quoted in *Education U.S.A.*, March 26, 1964, p. 117.

> situation . . . has influenced the kind of curriculum studies undertaken under the auspices of scholarly groups.[35]

A number of studies have been made in certain of the separate subject fields in the social studies, and many others were under way in 1965. For example, a report of the National Task Force on Economic Education, *Economic Education in the Schools*, has been widely distributed. A number of other developments in economic education have been sponsored by the Joint Council on Economic Education. Other projects looked toward reorganization of social studies instruction through new approaches and materials in history, geography, civics, anthropology, sociology, and the behavioral sciences. One of these, the Anthropology Curriculum Study Project, had support from the National Science Foundation, the others having been supported by professional associations and, in a few instances, by philanthropic foundations. Projects on such special topics as world affairs, citizenship, problems of democracy, and foreign relations also contributed new material.

The comprehensive development seeming to have potentially the widest significance in the mid-1960's is "Project Social Studies" of the United States Office of Education. This project parallels Project English, reviewed earlier in this chapter. Also operating under the Cooperative Research Program, Project Social Studies had made funds available in 1964 for nine curriculum centers at major universities, and also for numerous research projects and developmental activities, with other activities still projected. The curriculum study centers aim to fulfill one or more of these purposes:

> (1) To redefine the aims of social studies curriculums at one or more grade levels; (2) to develop sequences of presenting subject matter that are based on what is known about human development and the teaching-learning processes; (3) to work out methods and prepare materials to meet specific needs; (4) to try out new methods and materials and evaluate them; and (5) to disseminate information about the most promising methods and materials.[36]

Illustrative of the efforts and also of the confusions in the social studies field are two publications of the early 1960's of quite different sorts, both sponsored by the American Council of Learned Societies.[37] The first of these, *The Social Studies and the Social Sciences*, was jointly sponsored by the ACLS and the National Council for the Social Studies and was intended to provide general guidelines for curriculum revision in the social studies as well as to underline the urgency of this revision. The foreword of this publication optimistically stated:

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[35] Fraser, *op. cit.*, p. 73.

[36] Gerald R. Smith, "Project Social Studies—A Report," *School Life*, 45:25 (July, 1963).

[37] See Gordon B. Turner, "The American Council of Learned Societies and Curriculum Revision," in Heath, *op. cit.*, for a review of the interests and activities of ACLS in the social studies field.

> The social studies in the schools are now in a state of ferment from which they are bound to emerge substantially altered. Scholars in the universities and teachers in the schools are joining in co-operative efforts to re-fashion the various segments of the curriculum in order to bring them into line with modern knowledge and current needs.[38]

It was further noted, however, that "a book of this nature is only a first step in the long and arduous process of revising and revitalizing the social studies program in the schools."[39] The book itself consists of essays by scholars in the fields of history, geography, political science, economics, cultural anthropology, sociology, psychology, Asia, and Russia and Eastern Europe. These essays sought to indicate the kinds of concepts, knowledge, and techniques in each area that the authors believed important for students to acquire in elementary and secondary schools. The report is concluded with a chapter by Lewis Paul Todd, representing the National Council for the Social Studies, which pleads for a comprehensive program of curriculum development in the social studies:

> If it is true, as we believe it to be, that the social studies hold one of the keys to our future as a nation, and to the future of the free world, then any effort to vitalize the social studies program should command the highest loyalty and the undivided attention of all those involved in the work. Perhaps, given sufficient funds, it would be possible to draw representative groups of social scientists, specialists in child development, classroom teachers, and administrators together to work over sustained periods of even a year or more. One would not expect this group to hand down the final words of wisdom. One would expect, however, that its continuing studies, its pinpointing of areas in which research was badly needed, and its recommendations in regard to content and organization and method would supply the schools with the continuing flow of information on which experiments could be based and more effective practices developed.[40]

Thus this book, although containing a wealth of suggestions for curriculum revision in the various social sciences, is again primarily evidence of the need to take a somewhat more unified approach to social studies curriculum development than has recently been used.

Another publication, appearing in 1963, attempted to evaluate the current status of the social studies: *Where, When, and Why: Social Studies in American Schools.* This book was prepared by the reporter Martin Mayer, who two years earlier had written a widely cited report, *The Schools.* One reviewer called his second report an "acid view of the social studies."[41] This reviewer noted that "uneven reporting, unsupported conclusions, dismal organization, and superficial analysis cannot be redeemed by prior reputation and successful merchandising."[42] The origin of Mayer's book with the American Council of Learned Societies and the Carnegie Corporation was described by the author in his introduction as follows:

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[38] American Council of Learned Societies and the National Council for the Social Studies, *Social Studies and the Social Sciences* (New York: Harcourt, Brace & World, Inc., 1962), p. v.

[39] *Ibid.*, p. ix.

[40] Lewis Paul Todd, "Afterward: Revising the Social Studies," in *The Social Studies and the Social Sciences*, p. 302.

> Applying to the Carnegie Corporation for money, ACLS was greeted with a question: "Admitting that we do have a crisis in social studies—what reason do you have to believe we can do anything about it?" At the suggestion of Carnegie's president, John Gardner, who is herewith thanked (more or less), ACLS came to me and asked if I would be willing to take a year—or as much of a year as I could manage—and hunt for the people and the ideas that might work in the social studies the kind of transformation the mathematicians and scientists have wrought in instruction in their subjects in many schools.[43]

The book closed with a chapter entitled "Are the Math and Science Movements a Model for Reform?" and Mayer seemed to feel that they were. Another reviewer suggested that it is this chapter which "gives this report significance."[44]

In 1963 the Ford Foundation granted over a million dollars to the corporation organized by Jerrold Zacharias, who had headed the Physical Science Study Committee at the Massachusetts Institute of Technology. This corporation, Educational Services, Incorporated (ESI), was to use the grant to revitalize the teaching of humanities, notably history and social studies. By late 1964 ESI's Social Studies Curriculum Program had materials in preparation or in trial use for certain phases of an elementary sequence ("Becoming Human" and "Becoming Civilized"), a junior high sequence ("Classics" and "Subject to Citizen"), and high school sequences ("Nineteenth Century").[45] An ACLS spokesman commented in a 1964 publication that "some of the best minds in the scholarly disciplines, some of the most talented and experienced teachers in the schools, and some of the finest school systems in the country" were eager to work on curriculum revision and predicted that the Social Studies and Humanities Curriculum Program (SCLS–ESI) "will not fail, therefore, from lack of talent nor from lack of agreement on what intellectual equipment students ought to have when they emerge from high school."[46]

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[41] Donald W. Robinson, "Martin Mayer's Acid View of the Social Studies," *Phi Delta Kappan,* 44:451 (June, 1963).

[42] *Ibid.,* p. 452.

[43] Martin Mayer, *Where, When, and Why: Social Studies in American Schools* (New York: Harper & Row, Publishers, Inc., 1963), p. ix.

[44] Irving J. Sloan, "Inside Social Studies," *Saturday Review,* June 15, 1963, p. 79.

[45] Educational Services, Inc., *ESI Quarterly Report, Summer–Fall 1964* (Watertown, Mass.: ESI, 1964), pp. 24–26.

Thus, even with a later start than mathematics and science, curriculum reform in the social studies seemed well under way by 1965. Certainly there has long been widespread activity in school systems toward improvement in the social studies. A survey made by the National Council for the Social Studies of school systems having 30,000 or more pupils reported in 1963 that of the more than 500 systems responding, about 400 indicated that work on the social studies curriculum was in progress.[47] The many projects in the separate social sciences, the comprehensive curriculum studies supported by Project Social Studies, and the 1964 National Defense Education Act amendments augured well for a long-needed revitalization of instruction in social studies. As already noted, several of these subjects were included as "critical" ones in the 1964 NDEA amendments: Title III funds for equipment and material could be used for history, civics, and geography, and the new Title XI authorized grants for teacher institutes in history and geography in elementary and secondary schools. Furthermore, institutes authorized for individuals in the following categories were expected to be especially helpful in improving social studies instruction:

> (2) who are engaged in or preparing to engage in the teaching of disadvantaged youth and are, by virtue of their service or future service in elementary or secondary schools enrolling substantial numbers of culturally, economically, socially, and educationally handicapped youth, in need of specialized training; except that no institute may be established under this title for teachers of disadvantaged youth unless such institute will offer a specialized program of instruction designed to assist such teachers in coping with the unique and peculiar problems involved in the teaching of such youth,
>
> (3) who are engaged as, or preparing to engage as, library personnel in the elementary or secondary schools, or as supervisors of such personnel, or
>
> (4) who are engaged as, or are preparing to engage as, educational media specialists.[48]

Vocational and Technical Education

Many reasons underlined the needs accumulated by 1960 for substantial curriculum study and improvement in the field of vocational and technical education. The persistence of unemployment in an affluent economy was evidence of the need for additional vocational training of many early school dropouts and also of youth who fail to secure vocational preparation in their secondary and early college years. Data showing the relationship of employment and education, such as shown in Table 7, clearly support arguments for increased educational opportunity. Furthermore, training programs in many secondary schools had little if any relevance for the job opportunities available. For example, a 1963 report of studies relating to *Jobs and Training for Southern Youth* included in its conclusions these pertinent ones:

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[46] Turner, *op. cit.*, p. 158.

[47] T. Marcus Gillespie, "Social Studies—Development," *Bulletin*, National Association of Secondary-School Principals (No. 286), 47:141 (November, 1963).

[48] Public Law 88–665, p. 9.

TABLE 7

Jobs are changing: workers, Too, Must Change

The decade just past, 1953 to 1962, saw a decline of nearly 1 million in the number of jobs held by workers whose median educational attainment was less than 9 years of schooling. But other jobs increased; and the ones that increased the fastest were the ones in which workers had the highest educational attainment:

MEDIAN EDUCATIONAL ATTAINMENT	NUMBER (*in thousands*) EMPLOYED 1953	NUMBER (*in thousands*) EMPLOYED 1962	PERCENT CHANGE
Less than 9 years	11,730	10,766	− 8.2
9 to 12 years	26,434	27,180	+ 2.8
12 to 16 years	18,166	21,861	+20.3
16 years and over	5,448	8,040	+47.6

Source: U.S. Department of Labor, "Manpower Report of the President," March. 1963.
Reprinted from *School Life;* 46:9 (March–April, 1964).

> Employment opportunities in agriculture are declining steadily in each of the twelve southern states. Despite this fact, the number of students being trained in vocational agriculture by the South's public high schools continues to increase. The entire program of vocational agriculture should be reassessed and retained in the curriculum only in those high schools where employment surveys indicate a need for agricultural workers. . . .
>
> The general status of vocational education in the South has been one of substantial growth in types of programs and total number of youth involved. With the exception of agriculture, these developments seem to be in keeping with the current trends. However, the state and regional figures of progress obscure the weaknesses in programs in many schools and communities. Many of these programs are not based upon employ-

> ment opportunities and employer preferences for training in job skills by the high schools.[49]

A report from the United States Office of Education of expenditures of federal funds for support of vocational courses in high schools showed that of all of the states using these funds in 1961–1962:

> Only twelve were offering training for drycleaners
> Only nine, for office-machine repairmen
> Only six, for appliance repairmen
> Only six, for workers in the heating and ventilating business
> Only four, for dental technicians
> Only three, for automobile upholsterers
> Only three, for hospital aides
> Only two, for nurses' aides
> And only one was offering training for business-machine repairmen.[50]

This report also noted:

> The smaller the community, the less likely it was, generally, to offer its children opportunities to prepare themselves for work in the trades, in industry, or in the distributive occupations; yet many of the children in small communities will eventually want to enter such work and will in all probability move to a city to find it.[51]

Perhaps the most publicized study in vocational education of the early 1960's was that of the panel of consultants on vocational education headed by Benjamin Willis, superintendent of the Chicago Schools, and published under the title *Education for a Changing World of Work* in 1963. This report called for extensive revisions in vocational education at the secondary and post–high school levels and for substantial increases in federal support of vocational education.

What may prove to be a monumental step forward in vocational education is the federal Vocational Education Act of 1963. The Declaration of Purpose of this act indicates its comprehensive and generally forward-looking character:

> SECTION 1. It is the purpose of this part to authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the State—

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[49] James W. Whitlock and Billy J. Williams, *Jobs and Training for Southern Youth* (Nashville: Center for Southern Education Studies, George Peabody College for Teachers, 1963), pp. 33–34.

[50] "The Vocational Education Act of 1963," *School Life*, 46:3 (March–April, 1964).

[51] *Ibid.*

> those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps—will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.[52]

The provisions of the act were summarized in part as follows by United States Commissioner of Education Francis Keppel in a memorandum to state officials:

> The Act will give you the authority and flexibility to fill the gaps you have long recognized. Among the new features are authorizations for the first time for the construction of certain vocational school facilities, for an experimental program of residential schools needed for youth in some rural and urban areas, for work-study programs for those who need employment in order to stay in school, for education adapted to the needs of persons economically and educationally disadvantaged, and for research, demonstration and experimental programs. The significant changes in the Smith-Hughes and the George-Barden Acts will give you a chance to use more realistically funds previously restricted to specific categories. In addition the programs for training practical nurses and technicians have been made permanent.[53]

One of the most promising provisions of the act was that relating to funds for work-study programs. State plans for using these funds must include provisions that the students involved be enrolled or accepted for enrollment in an approved vocational education program, need the part-time earnings, be fifteen to twenty years of age, be capable of staying in good standing; that the work take not more than fifteen hours per week while the student is in school, pay not more than $45 per month (or $60 if the student cannot commute from his home) or $350 in any academic year (or $500, if he cannot commute); and that the part-time employment be either by the local educational agency or by some other public agency or institution. Many legislators and educators hoped that this program would help to hold youth in school for valuable vocational training both in school and on a job.

There is the persistent issue in this field of the responsibility of the public schools for vocational education. Some citizens and educators have preferred that specific vocational and technical education be left to business and industry and to special technical institutes operated at a post–high school level, such as community colleges and regional institutes. Still others have insisted that a comprehensive secondary school program should include complete programs of vocational education. Although the 1963 act provides support for both types of programs, we ourselves believe that the latter program—the truly comprehensive high school—is in the ascendancy and will increasingly permeate public education. Even though vocational and technical education may be provided in special public institutions, the program should be under the control, we believe, of public school boards of education with curriculum development attuned to total provisions for a well-balanced program of education for all youth. In order for this point of view to prevail in a school operation it is certain that a continuing critical look at institutional lag in vocational education is essential. Furthermore, projective studies of vocational trends, secondary school reorganization, and the development of work experience programs continue to be needed. We confidently expect that the widespread concerns of the early 1960's for school dropouts, culturally deprived youth, and terminal students, and for the related problems of our social and economic systems, will lead to a vastly expanded and improved program of vocational and technical education.

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[52] Public Law 88–210, 88th Cong. H.R. 4955, December 18, 1963, p. 1.

[53] Excerpt from memorandum dated December 26, 1963, from Francis Keppel, U.S. Commissioner of Education, to Chairmen of State Boards for Vocational Education, Chief State School Officers, and State Directors of Vocational Education, p. 1. Mimeographed.

THE IMPACT OF DEVELOPMENTS IN THE SUBJECT FIELDS

It will be some years before the impact of the curriculum developments under way in subject fields can be fully appraised, although certain problems are clear.

Competition and Balance among the Subjects

The perennial problem of maintaining balance among the subjects which compete for their place in the curriculum has not thus far been solved by the ferment in the subjects. In fact, the problem has been sharply accentuated by the great pressures to increase enrollments in certain fields, naturally at the expense of others at the secondary and college levels, and to subsidize certain fields but not others. In all fairness to the competing interests involved, we should note that the situation in 1958 was such as to invite these pressures. As shown in Figure 10, 42 percent of the typical 1958 high school graduate's program was made up of English and social studies. This figure compared with a total of 31 percent of the graduate's program in mathematics, science, and foreign language. The relatively little attention given the arts and vocational education is shown by their inclusion in the "Other" figure of 8 percent. Although these are average figures, and despite the lack of any absolute criteria for judging such relative proportions of time, certainly it was

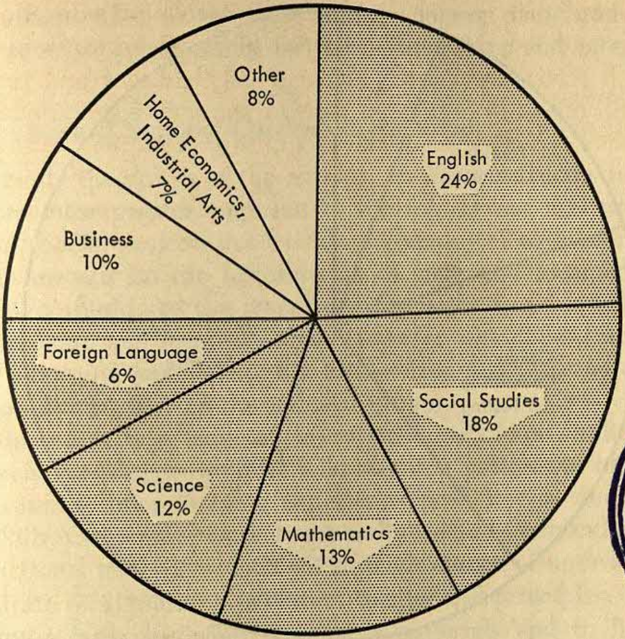

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Figure 10: Proportion of High School Pupil Programs (1954–1958) Devoted to Certain Subject Matter Areas
Source: Edith S. Greer and Richard M. Harbeck, *What High School Pupils Study* (Washington, D.C.: U. S. Office of Education Bulletin, 1962, No. 10), p. 110.

to be expected that proponents of subjects other than English and social studies would grasp an opportunity such as that presented in 1958 to press for more time in their subject fields. The National Defense Education Act provided an effective lever for science, mathematics, and foreign languages.

An interesting contrast is shown in Figure 11, showing the distribution of federal funds for curriculum strengthening by fields supported by the National Defense Education Act during the fiscal year 1962. Comparisons of the figure on pupils' programs in the 1958 graduating class and federal expenditures for support of programs four years later could be interpreted as an effort by the federal government to correct an imbalance in the secondary school curriculum. However, many also interpret the situation as support of a new imbalance favoring science, mathematics and foreign languages over other subjects. One thing is certain: the competition continues. We also believe it certain that basic decisions as to appropriate emphases on respective subject fields need to be reached locally within a framework of minimum expectations, probably set at the state level, and of agreed-upon criteria for determining balance in the curriculum provided (see Chapter 7).

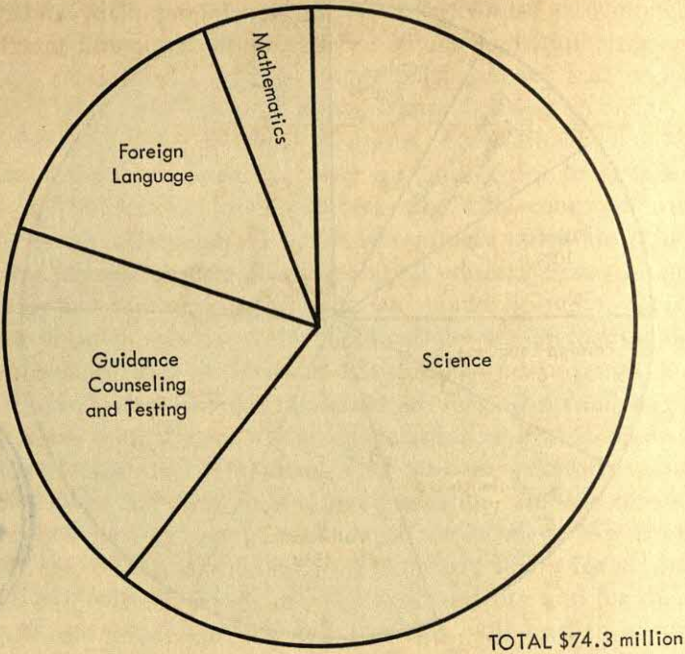

Figure 11: Federal Funds for Curriculum Strengthening: 1962
Source: The Federal Government and Education, (Committee on Education and Labor, House of Representatives, Eighty–eighth Congress, First Session, June, 1963), p. 47.

Compartmentalization and Fragmentation

Many educators have feared the possibility that national curriculum studies would result in further compartmentalization and fragmentation of the curriculum.[54] We have conflicting observations of the national studies in regard to their impact (see the various items in our chapter bibliography for differing observations). In some studies there seems to be an effort on the part of representatives of separate disciplines to find interdisciplinary approaches to more effective curriculum plans. We doubt, however, whether satisfactory protection against departmentalization and fragmentation can be achieved at a national level. It is probably achieved best by the individual teacher as he seeks to present subject matter in its proper relationships, with focus on the learner's own powers of integration. The teacher needs support and help from curriculum planning groups alert to the need for developing plans and selecting teaching materials which facilitate such relationships and integration.

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[54] See for further elaboration of the point of view stated in the final pages of this chapter, two related publications of one of the authors: Alexander, William M., *Changing Curriculum Content,* and William M. Alexander and Lloyd Michaels, "Current Curriculum Development: Problems and Prospects Ahead," in *New Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, 1965).

Tendencies toward National Curriculum Planning

Undoubtedly the power of the national curriculum studies has tended to give somewhat greater emphasis to the role of national professional groups and special projects in curriculum planning. This is seen by some as possible inroads on the historic role of state and local educational initiative. We would see the recent developments more as resources of great aid to state and local planning. However, again the test is in the actions of state and local leadership in assessing and utilizing proposals, reports, and materials from the national groups.

On the favorable side, many of the national curriculum studies seem to be effectively breaking away from long-standing patterns of organization which encourage poor learning experiences and fail to develop basic learning skills. Curriculum workers generally weclome curriculum designs and instructional materials which cut through masses of uninviting detail to concentrate on significant, persistent themes and principles. The problem has been both to define such basic materials and to have them studied in such ways as to become the intellectual possession of pupils. The great investment made in the national projects and the cooperative effort involving representatives of the disciplines and the schools may well be producing better-defined and better-learned concepts as well as insights into their continuing definition and learning. These projects have also given welcomed attention to the development of learning skills and interests for continued learning. The method of inquiry is stressed in the new subject matter far more than ever before.

The curriculum projects have also helped very greatly to overcome those criticisms of the subject curriculum which are based on the difficulties of incorporating new knowledge in the school subjects. The chief tangible products of the curriculum projects are found in the plethora of new instructional materials now available or in process. Although textbook production has been a major outcome, every possible type of teaching aid is included in the array of aids resulting from the various projects. Perhaps more significant than the number and variety of materials is the careful process of development and evaluation used in several projects. These projects have utilized writing teams, tryout of materials in selected centers, revisions based on tryout, and subsequent widespread evaluation of materials in classroom use. The process of developing materials employed in the more exemplary, well-subsidized projects, coupled with extensive in-service education through National Science Foundation institutes and other means, definitely accord with accepted principles of curriculum and instructional improvement.

Vertical Articulation

The emphases on pushing certain subjects down, the acceleration of students, and the focus of some national studies on certain subjects at only one or a few grade levels accentuate the problem of vertical articulation of the curriculum. Some aspects of this problem were commented on by Lester W. Nelson of the Ford Foundation in the following statements:

> The area most urgently in need of change is in the relationship between the several levels of our educational structure. The traditional approach to the problem has been primarily curricular. We have given much thought to establishing priorities for the content of learning, but relatively little attention to revising the time allotted to the various phases of education. We generally assume that the quality of learning is a function of time and that this function is constant within each level of the educational structure and for all individuals within each level. . . .
>
> As increasing numbers of secondary schools develop programs of advanced work, the problem of articulation between the secondary schools and the higher institutions will become more acute. It is seriously misleading to assume that this movement is destined to have only peripheral impact on higher education. The impact is being felt already in many colleges and, in some, is having the effect of requiring a virtual reordering of the undergraduate program.[55]

We would add to Nelson's points two other problems of vertical articulation: (1) the relationship between elementary and secondary education as an increasing number of subjects formerly confined to the secondary school years are being offered in the upper years of the elementary school; and (2) the critical need for definitions of scope and sequence within those subject fields where curriculum improvement tends to be in some schools only a matter of introducing a new program at one grade level without reference to succeeding or even preceding content in the same field. These problems merit the united and vigorous attention of both the special field and the general curriculum planning groups. Undoubtedly plans of differentiated pupil progress (see Chapter 11) as well as substantial reorganization of the administrative structure of individual schools may be involved. In addition, continued and increased planning between representatives of secondary and higher education is essential.

Teacher Education

Curriculum planning to incorporate new and changing curriculum content needs much more assurance that has been possible as to the preparation of teachers in the changing content. As of 1965 the slight impact of the new programs on university courses in the fields of teacher specialization was generally deplored. For example, in his analysis of *School Curriculum Reform* Goodlad labels this problem as a major block to the success of the new programs:

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[55] Lester W. Nelson, "Challenge and Change," in Paul Woodring and John Scanlon (eds.), *American Education Today* (New York: McGraw-Hill Book Company, Inc., 1963), p. 220.

> The current curriculum reform movement, in building courses around things fundamental, is closing a long-standing gap between curricular theory and school practice and is awakening thousands of young people to the prospects of a good life inherent in the pursuit of knowledge. But it is only fair to say that this movement—like others before it—has not yet developed effective means to influence content and pedagogy in those colleges and universities that prepare tomorrow's teachers, school leaders, and teachers of teachers. And until it does, it will not provide for continuing self-renewal.[56]

WILL THE SEARCHES FOR NEW CURRICULUM CONTENT CONTINUE?

Seeing the advances made possible by the national curriculum studies, one wonders what will happen as the subsidized studies complete their assignments and exhaust their funds. The history of American education is full of important projects that folded after their support was over—folded so completely that in a few years their only vestiges were honorable mentions in chronological tables and similar treatments.

The underpinning of these projects by congressional appropriations and foundation grants seems quite unstable. The projects discussed in this chapter have undoubtedly had more impact than most previous national curriculum studies. Earlier the typical national committee's "study," poorly supported if at all, only described curriculum needs and made proposals for change. The newer projects have gone much further to ensure the tryout and diffusion of their proposals by developing materials, training personnel, and carrying on their own evaluations.

One cannot see how a continuing change of curriculum content can be assured without the continuation of such curriculum studies. Under whose aegis—whether universities, professional associations, government, or foundations—these should be operated seems a moot question. Certainly the projects have demonstrated clearly the desirability of a team approach to changing curriculum content. The major uncertainties ahead seem to be those of the support and location of the teams.

Perhaps government, philanthropy, and professional associations can find a formula for establishing, supporting, and utilizing curriculum materials centers which would maintain continued contact both with scholarly groups in the subject fields and with curriculum leaders in the schools. The centers would be clearinghouses for developing and disseminating materials which represent or suggest changing curriculum content. There might well be several such centers in each major curriculum subject field as generally included in elementary and secondary schools, in addition to several centers concerned with total curriculum design. Beginning steps toward such centers have been taken by the Project English and Project Social Studies centers at several universities supported by United States Office of Education grants. These centers will require financial and staffing patterns of a more permanent nature than the present national projects. Possibly the regional research laboratories provided for in the Elementary and Secondary Education Act of 1965 will help to meet this need in a continuing search for changing and improving curriculum content.

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[56] Goodlad, *op. cit.*, p. 76.

FOR FURTHER STUDY

ALEXANDER, WILLIAM M. *Changing Curriculum Content.* Report of the Conference on Curriculum Content, Chicago, October 19–20, 1963. Washington, D.C.: Association for Supervision and Curriculum Development, 1964.

Report of a conference of curriculum project directors and ASCD representatives to explore common concerns and interests in curriculum improvement through a changing content.

AMERICAN COUNCIL OF LEARNED SOCIETIES AND THE NATIONAL COUNCIL FOR THE SOCIAL STUDIES. *Social Studies and the Social Sciences.* New York: Harcourt, Brace & World, Inc., 1962.

This compilation of papers by various scholars in the branches of social studies represents an effort to state what a social studies program should include and also illustrates the problem of comprehensive reorganization in this field.

AMMONS, MARGARET, AND ROBERT S. GILCHRIST. *Assessing and Using Curriculum Content.* A Report of the Second National Conference on Curriculum Projects, Chicago, December, 1964. Washington, D.C.: Association for Supervision and Curriculum Development, 1965.

Suggests guide lines for use in school systems in planning and evaluating the use of new curriculum content and materials.

BARLOW, MELVIN E., ED. *Vocational Education.* The 64th Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1965.

Comprehensive review of the field of vocational education, with implications for future developments.

FRASER, DOROTHY M. *Current Curriculum Studies in Academic Subjects.* A Report Prepared for the Project on Instruction. Washington, D.C.: National Education Association, June, 1962.

Annotations of thirty-nine curriculum developments in English language arts, modern foreign languages, mathematics, science, and social studies.

GILCHRIST, ROBERT S., CHM. *Using Current Curriculum Developments.* Washington, D.C.: Association for Supervision and Curriculum Development, National Education Association, 1963.

Analysis and description of seventy-nine curriculum projects and studies in the arts, English, foreign languages, health education and physical education, mathematics, science, social studies, and vocational and technical education. Also includes brief chapters on use of these developments, instructional technology, and learning theory.

GOODLAD, JOHN. *School Curriculum Reform in the United States.* New York: The Fund for the Advancement of Education, March, 1964.

This critique of the approaches to curriculum improvement used in several illustrative projects provides a critical analysis of the movement with recommendations for its continuing direction.

HEATH, ROBERT W., ED. *New Curricula.* New York: Harper & Row, Publishers, Inc., 1964.

Reports from the project directors of several major curriculum projects in mathematics, science, and other fields. See especially Chapter 5, "The Requirements for Major Curriculum Revision," and Chapter 12, "Evaluation for Course Improvement," for principles and procedures of curriculum planning and evaluation.

"Innovations in Instruction," *National Elementary Principal,* 53:1–92 (September, 1963).

This issue on innovations includes articles on curriculum innovations in mathematics, science, social studies, and language arts.

JOINT PROJECT, American Association for the Advancement of Science and the Student Teaching Center, University of Maryland. *Second Report of the Information Clearinghouse on New Science Curricula.* College Park, Md.: The Project, March 1, 1964.

Specific information about purposes and products of twenty-two science and mathematics curriculum projects with National Science Foundation support, and twelve projects with other than NSF support.

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS. *The Revolution in School Mathematics.* Washington, D.C.: The Council, 1961.

Describes changes in the teaching of mathematics and their causes, and how these changes are implemented in local school systems.

NATIONAL EDUCATION ASSOCIATION, PROJECT ON INSTRUCTION. *The Scholars Look at the Schools: A Report of the Disciplines Seminar.* Washington, D.C.: The Association, February, 1962.

Summary of presentations and discussions by representatives of major disciplines as to new and needed emphases in the school curriculum.

"Secondary-School Curricular Areas: Issues and Developments," *Bulletin* of the National Association of Secondary-School Principals (No. 288), 47:1–168 (November, 1963).

Articles on each of twelve subject fields are devoted to issues, developments, and "a principal's view."

UNRUH, GLENYS, ED. *New Curriculum Developments.* Washington, D.C.: Association for Supervision and Curriculum Development, National Education Association, 1965.

Reports curriculum developments in various fields initiated since the Association's 1963 *Using Current Curriculum Developments* (see Gilchrist), and interprets the various developments. Also includes a section on issues and prospects ahead.

CHAPTER 10

Instructional Organization in Curriculum Planning

The plan for the curriculum of a school or a system of schools, as shown in the models in Chapter 1 and in a more detailed elaboration of the planning process in Chapter 8, should encompass all aspects of the educational program. One of the important responsibilities of educational planners is the organization of the school for instructional purposes. Organization, obviously, is necessary in any kind of group undertaking if purposes are to be achieved. This chapter will analyze some of the ways in which schools are organized so that instruction may be provided, and some of the issues and problems the curriculum worker must face as he formulates his total plan for the education of children and youth.

Typically, writers on educational subjects identify two aspects of instructional organization: vertical and horizontal. The vertical dimension refers to the arrangements for the sequential education of pupils year after year; the horizontal, to those for the management of pupils during the school day or school year. But organizing schools for instruction is a much broader and more comprehensive matter than this; it must be concerned with a number of aspects of schooling.

These arrangements will determine to a considerable degree the extent to which teachers will be able to provide the kinds of learning experiences that will enable pupils to attain the objectives of education. It is apparent, therefore, that the validity and appropriateness of all organizational arrangements must be judged on the extent to which they contribute to the realization of educational goals by *all* the pupils to be educated. As in all other curriculum endeavors, the first step in planning is to define the objectives of the school, and then to devise instructional arrangements that will enable the school to achieve its goals most fully and efficiently.

ORGANIZING A SYSTEM OF SCHOOLS

Schools must be established and organized if children are to be educated. In the early part of this century schools were traditionally organized into an elementary school, consisting of eight or, in some instances, seven years of schooling, and a secondary school offering four years of schooling. Beginning with the second decade of the century, however, modifications in this traditional structure have been under way so that at the present time four principal methods of organizing the educational program by levels are used. The types and the extent to which each is used in the urban areas of the United States are as follows:[1]

TYPE OF SCHOOL ORGANIZATION	PERCENT OF URBAN SCHOOL SYSTEMS
K6–3–3 or 6–3–3	33.7
K6–2–4 or 6–2–4	15.7
K6–6 or 6–6	14.9
K8–4 or 8–4	24.7
Others	11.0

Inasmuch as Dean's study included only school districts located in urban places, it must be recognized that thousands of school districts in towns and villages of less than 2500 population and in the rural areas are not included in these data. Most of the rural elementary schools include grades 1 through 8, with possibly a kindergarten added, but in the towns and villages the school may be organized in any one of the four patterns listed, although other studies have shown that the 6–6 or the traditional 8–4 plan predominate in these situations.

Public nursery schools, even those operated by school systems, are usually not a part of an elementary school but operate as a separate agency. At the other end of the educational program, junior and community colleges and technical schools are also usually organized independently of the secondary school. Vocational schools may be either a parallel secondary school or an independent agency separate from the regular educational program of the common schools.

In recent years important modifications in vertical organization have been proposed, and in a few instances are being tried out by public school systems. One of the modifications, strongly recommended by an advisory committee to the New York State Commissioner of Education,[2] is to organize a school vertically on a 4–4–4 plan. The first unit, which remains a neighborhood school serving young children, would comprise the kindergarten and, hopefully, in time, prekindergarten programs and the first four years of elementary schooling; the second unit would be an intermediate school, offering the next four years of schooling or what is normally grades 5 through 8. The secondary school would include grades 9 through 12. Although the proposal of the New York committee was designed primarily to deal with the problems of desegregating the public schools, a number of educators see merit in this plan of organization, and believe that it offers some advantages over the other types of school organization.

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[1] Stuart E. Dean, *Elementary School Adminstration and Organization*, U.S. Office of Education Bulletin 1960, No. 11 (Washington, D.C.: Government Printing Office, 1961), p. 11.

[2] State Education Commissioner's Advisory Committee on Human Relations and Community Tensions, *Desegregating the Public Schools of New York City* (Albany: University of the State of New York, May 12, 1964).

A second modification of the methods of organizing schools is the development of an educational park. A complex of schools would be built in the park, with a total program of education from kindergarten or even nursery school, if the district chooses to provide such facilities, through occupational and technical education is offered in this plant. The New York advisory committee also recommended the establishment of an educational complex as a method of implementing its proposed 4–4–4 plan but the concept has also been considered extensively by other metropolitan school systems and is being developed at this time in the Pittsburgh and the Saginaw Township (Michigan) school districts and has been under study in the Cleveland, Berkeley (California), and the East Orange (New Jersey) school systems.

The vertical organization of the school is, indeed, a major curriculum consideration. The types of educational experiences that may be provided children and youth will often be dependent on the type of school-level organization adopted by the local district. Needless to say, excellence will not exist in an educational program simply because of an organizational structure; on the other hand, the kinds of learning opportunities which educators may provide children is often determined, in part, at least, by the type of school organization adopted by the local system. One aspect of comprehensive curriculum planning is to study the entire matter of vertical organization of the school program so that the best possible kinds of educational experiences may be provided all of the children residing in a community.

ORGANIZING SCHOOLS FOR INSTRUCTIONAL PURPOSES

The school itself, after the system of education has been determined and schools have been established, must be organized for instructional purposes. Pupils must be gathered together into groups for class instruction activities, or arrangements made for individual instruction on some basis, materials must be made available for study purposes, policies and regulations must be established for the management and administration of the school, teachers must be assigned, and policies determined for the institutional arrangements of the school.

Organizing the Student Body

The Graded Plan. The organizational method used exclusively in the schools of the United States until a few years ago, and still used in all but a small proportion of the schools that are experimenting with new arrangements, is the graded plan. The scheme of school grades is well known to teachers and administrators. Although there usually is some grouping of children in any mass educational situation, it was not until the middle of the nineteenth century that the formal grade organization was adopted by the American school system. Essential in the graded type of instructional organization is the division of the school curriculum into subjects or areas of study, and the further subdivision of the content to be studied in each subject or area into blocks or units of work that will constitute a sequential study of the subject field.

Equally important in the graded structure is the bringing together of a group of children who presumably are at about the same point in their educational development so that all may equally well study the same general body of content and participate in the same learning activities. The basis for grouping children in grades, almost universally used, is by chronological age at the outset of their school career, that is in grade 1, and then the systematic promotion of the children at the end of each school year to the succeeding grade. Although schools do on occasion fail to promote all children to the next grade, and a few pupils are accelerated, nevertheless, after the first year or two of schooling, considerable variation exists in the ages of the children assigned to a grade. The dispersion in age groups becomes even more marked in the secondary school. For example, the 1960 Census shows that 2.1 percent of all eleven-year-olds attending school were enrolled in grades 1, 2, or 3; 7.1 percent in grade 4; 34.3 percent in grade 5; 51.9 percent in grade 6; 4.1 percent in grade 7; and 0.6 percent in grades 8 or 9. The sixteen-year-olds enrolled in school distribute themselves among the grades as follows: grades 1 to 7, 3.1 percent; grade 8, 3.2 percent; grade 9, 8.8 percent; grade 10, 30.2 percent; grade 11, 49.9 percent; grade 12, 4.9 percent and already graduated from high school, 0.3 percent.[3]

Although about eight pupils in ten of an age group, as shown by these two examples, are enrolled in two consecutive grades, the assumption that the grade structure groups children comparable in their readiness and capacity to undertake particular segments of schooling is highly questionable, not only because school practice does not result in uniform age grouping but, second, the psychology of human development shows that children of the same age do not develop uniformly in any factors significant for schooling.

The wide range in intellectual capacities, achievement levels, and readiness for learning, as measured by widely used standardized tests for pupils enrolled in the same school grade, is shown by numerous research studies.[4] In analyzing such data, Cook and Clymer conclude that "grade levels do *not* signify definite standards of achievement."[5]

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[3] U.S. Bureau of the Census, *U.S. Census of Population: 1960, Detailed Characteristics, United States Summary*, Final Report PC(1)–1D (Washington, D.C.: Government Printing Office, 1963), Table 169.

Although the range in test scores is as great or greater among pupils enrolled in each of the secondary school grades in such things as reading ability, comprehension, abstract reasoning, problem-solving ability, mathematical skills, mental age, and similar characteristics of a common dimension to all pupils, the secondary school staff does not face the same problems in using a graded structure. This is principally because secondary schools, particularly those with multiple sections of required classes, as will be shown later, usually group pupils in a particular subject offered at a grade level on the basis of achievement levels and aptitude in the subject itself. Although elective subjects are usually listed for particular grade levels, most schools permit students in any of their grade levels to enroll in many of these subjects. The secondary school is more concerned about pupils' knowledge of prerequisite subject matter than it is in the maintenance of a rigid grade structure. Nevertheless, the grade structure itself is still a major factor in organizing the secondary school for instructional purposes, and its deficiencies as well as its advantages should be recognized at that level also.

Efforts to modify the rigidity and inflexibility of the traditional grade structure at the elementary school level began soon after the grade structure had become a part of the instructional organization of the American school system. As early as 1888, Preston Search, superintendent of schools at Pueblo (Colorado) initiated some modification in the plan. In the early part of the present century, Frederick Burk, president of the San Francisco State Normal School, also developed an individual progress plan of instructional organization in his elementary demonstration school. In 1919 the Winnetka (Illinois) elementary school district formulated what became the famous "Winnetka Plan" of individual progress in basic skill subjects.[6] The Dalton (Massachusetts) schools, and to a lesser degree several other school systems, also undertook a reorganization of the secondary school grade structure so as to permit more flexibility. Most of these plans simply provided for individual work in certain basic skill subjects rather than a reorganization of the grade structure itself.

However, many schools did reduce the rigidity of the grade structure by other instructional practices, such as the use of subgroups within a class, multiple textbooks in some of the school subjects, particularly reading, and more flexibility in the assignment of content to each grade level. Some schools introduced ability or achievement grouping within grades where more than one room or section of a grade was necessary in a school building.

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[4] Some of these data are given in Warren G. Findley (ed.), *The Impact and Improvement of School Testing Programs,* 62nd Yearbook, Part II, National Society for the Study of Education (Chicago: University of Chicago Press, 1963).

[5] Walter W. Cook and Theodore Clymer, "The Impact of Testing on School Organization," *ibid.,* p. 63.

[6] Carleton W. Washburne and Sidney P. Marland, Jr., *Winnetka: The History and Significance of an Educational Experiment* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963).

Nongraded Plans and Other Modifications. In recent years curriculum planners and school administrators have become interested in an instructional organization that minimizes the grade structure or eliminates it altogether for subunits of the elementary school. In such plans, labeled as "nongraded," grade designations for groups of pupils within the school or a subunit of the school are not used. Nongraded schools exist at both elementary and secondary school levels.

In May, 1959, a survey of the use of the nongraded plan in elementary schools was made by the Research Division of the National Education Association. On the basis of the research techniques it had developed, the division estimated that 6.3 percent of the urban school districts of the United States used the nongraded or primary-block plan in the school year, 1958–1959. It should be noted, however, that 19.2 percent of the school districts with populations of 500,000 or more report that they use the plan throughout the system or on a limited basis, as do 11.6 percent of the school districts with a population from 100,000 to 500,000 and 9.9 percent of the school districts with a population of 30,000 to 100,000. Obviously, the plan is not as extensively used in the smaller urban school districts.[7]

The study gives the following estimates on the extent to which grades are replaced by the plan:[8]

GRADES REPLACED BY THE NONGRADED PLAN	PERCENT OF DISTRICTS (*Weighted Estimate*)
Kindergarten and/or Pre-First and Grade 1	0.4
Kindergarten and/or Pre-First and Grades 1 and 2	13.5
Grades 1 and 2	11.3
Kindergarten and/or Pre-First and Grades 1 through 3	10.4
Grades 1 through 3	43.0
Kindergarten and/or Pre-First and Grades 1 through 4	1.8
Grades 1 through 4	9.1
Grades 1 through 6	5.7
Grades 3 and 6	4.8

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[7] National Education Association, Research Division, "Primary-Block Plans for Ungraded Sequences," Research Memo 1960—49 (Washington, D.C.: The Association, 1960). Mimeographed.

[8] *Ibid.*

It is our observation that the use of the nongraded organization has increased markedly each year; undoubtedly, the figures for 1958–1959 no longer reflect accurately the situation in the elementary schools.

The nongraded plan may best be understood by describing the instructional organization in schools that have adopted this type of organization. We will use for descriptive purposes the Roaring Brook School, Avon (Connecticut).[9] This school has organized the first four years of schooling—the traditional grades of kindergarten and 1, 2, and 3—into a nongraded primary unit. The instructional program in arithmetic and reading for these years of schooling has been divided into twelve learning levels. A level is simply a block of subject content and related learning experiences. It should be noted that the nongraded plan as used in this school and in most schools does not represent any important modifications of content, instruction, or curriculum experiences themselves; rather, it is a modification of the organization of the school for instructional purposes.

Figure 12 shows the level arrangement in reading. It will be noted that the levels are defined in terms of the books used for reading throughout the four years. The chart shows that the Roaring Brook School considers level 1 in arithmetic and reading as being equivalent to the usual kindergarten program; levels 2 through 5 as being equivalent to the traditional content for grade 1; levels 6 through 8, to that for grade 2; and levels 9 through 12 to that for grade 3.

The instructional program in the other elementary school subjects, such as science, social studies, the language arts, music, arts and crafts, and physical education, remains unchanged under this plan. The content and curriculum units in each of these subjects assigned to the second or third grade, for example, would still be taught to the groups of children working at the levels in arithmetic and reading that are assumed to correspond to these same grade levels.

The essential and unique feature of the nongraded plan in comparison with the graded structure is that children move from one level to the next in arithmetic and in reading whenever they have successfully achieved the educational objectives for that level. A child never fails nor does he skip units of learning experience. He simply progresses at, presumably, his own rate, but actually at the same rate as pupils of comparable achievement levels through a step of the instructional program. Children are assigned to level subgroups in accordance with their capabilities and achievement records so that all children in the subgroup are making about the same rate of progress. Administration of such a plan necessitates some shift among pupils from group to group several times

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[9] The Roaring Brook School, *The Nongraded Primary,* and *Educational Progress: Roaring Brook School* (Avon, Conn.: The School, n.d.); for an analysis of this plan of organization and a description of its use in the University Elementary School of the University of California at Los Angeles see John I. Goodlad, "Meeting Children Where They Are," *Saturday Review,* 48, No. 12, pp. 57–59, (March 20, 1965).

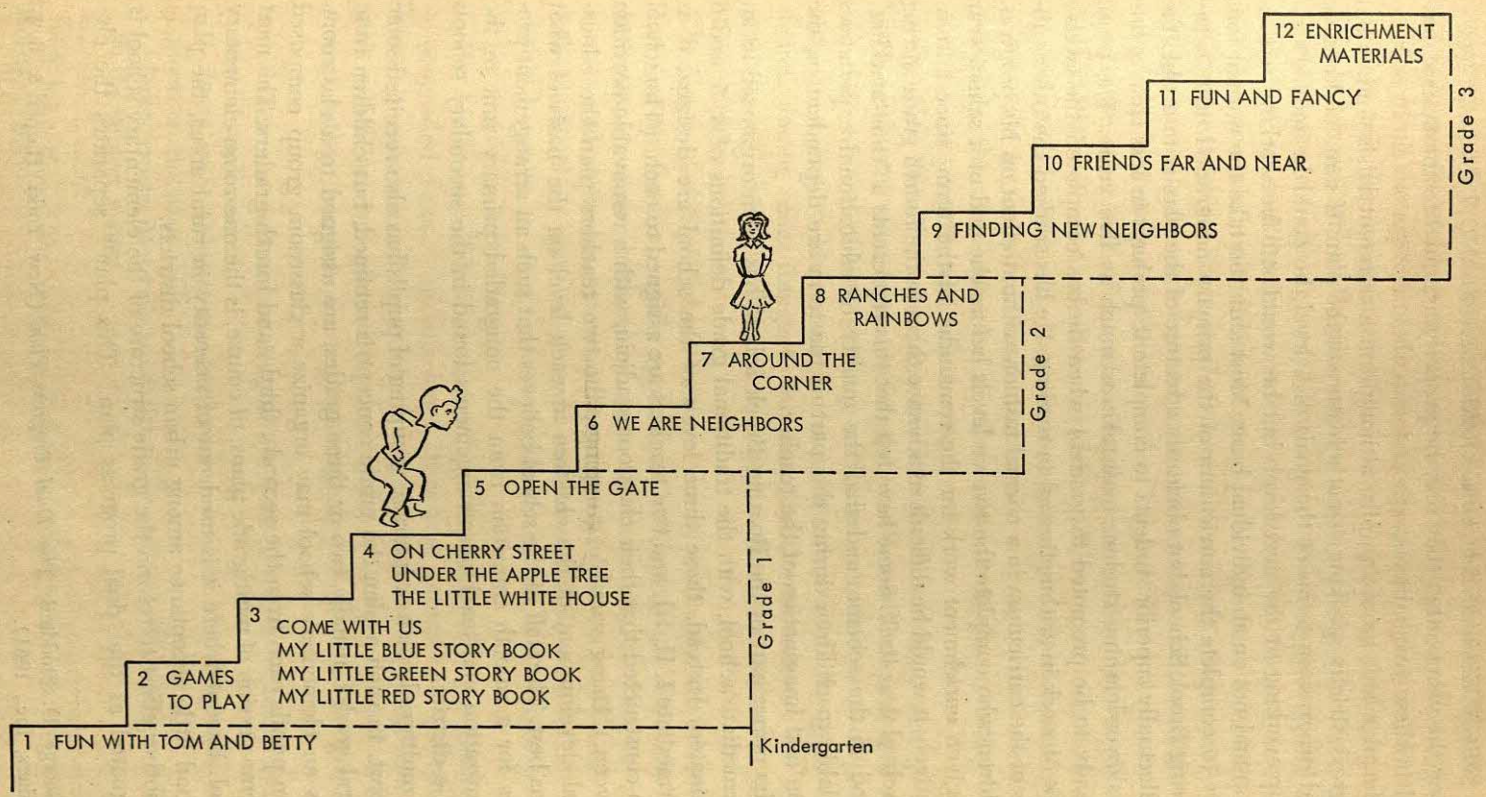

Figure 12: Organization of a Nongraded Primary Unit by Reading Levels
Source: Roaring Brook School, The Nongraded Primary (Avon, Conn., n.d.). Reprinted by permission of Roaring Brook School.

during the year so that they may be properly assigned to the appropriate level in these two subjects.

The plan still groups pupils, although on a different basis. Individual progress, strictly speaking, is not a feature of the plan. If some child made rapid progress in terms of the goals of a level, he could be moved to a group working at the next level, but he would still be working with a group and not on an individual basis. Most children take the normal four years to complete the curriculum of the primary nongraded unit in the Roaring Brook School, but obviously a feature of the plan is to enable the intellectually superior students to complete it, perhaps in less time, while the slower-learning student may take as much as five years. The pupil is ready to be promoted to grade 4 when he has completed the twelve levels of work in arithmetic and in reading. He has studied the other subjects of the curriculum in a normal fashion without effect on his progress. Children who complete the twelve levels before the end of a school year are given enrichment work for the remainder of the term, since administratively it would be difficult to advance them to the fourth grade during the school year itself. Some have felt that this represents a "time-marking" period in the scheme, and that the quality of educational experiences available to children during this part of the term are dependent on the vision and imagination of the teacher.

The upper part of the Roaring Brook School has been organized as an intermediate school, with the traditional grade definitions of 4, 5, and 6 eliminated. Instead, these three levels of the school are designated as Intermediate I, II, III, and two teachers are assigned to each. (The school is so constructed that their classrooms adjoin, with a removable partition between.) Using variable groupings, the two teachers plan the educational development of the children at each level on the basis of what seems best. The staff of the school believes that such an arrangement provides for a smooth transition from the nongraded primary unit to the organization and teaching arrangements found in the secondary schools of the district.

A multigrade plan or interage grouping of pupils has also received some support. In such a plan the grade concept is retained, but children from several grades, usually two or three grades, are assigned to a classroom. Thus an elementary school may organize a classroom group composed of ten pupils each from the second-, third-, and fourth-graders. The most extreme version of multigrade plans, of course, is the one-room elementary school. Except where it is used out of necessity in rural areas, the plan has had little acceptance among urban school districts.

Another effort to reform the grade structure of the elementary school is designated as the "dual progress plan." This plan[10] separates the elementary curriculum into two aspects, the "cultural imperatives," which consist of all the aspects of English and the language arts, and the social studies; and the "cultural electives," which consist of mathematics and science, music, arts and crafts, and recreation and health. The cultural imperatives are taught in a graded structure which is more inflexible than that found in most modern elementary schools today. Strict grade classifications are used with children grouped on the basis of ability and achievement levels. Each pupil is expected to achieve at his ability level, and presumably the pressure on him is rather intense. These subjects are taught by his homeroom teacher.

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[10] George D. Stoddard, *The Dual Progress Plan* (New York: Harper & Row, Publishers, Inc., 1961).

For the other half of his educational program, the child is placed in nongraded sections of mathematics and science, music, arts and crafts, and recreation and health. Each of these areas of instruction is taught by a specialist in the subject field. During the six years of his elementary schooling, the child advances in these areas of study according to his own rate of progress and achievement.

The plan takes its name from the fact that the student may progress at two different rates in the two aspects of the curriculum. Pupils spend the same amount of time studying each area, but their rates of progress vary according to their capacities and interests. Thus the plan is designed, among other things, to facilitate the development of the special interests and the capabilities of the child in the cultural elective aspects of the curriculum.

The Nongraded High School. As was stated previously, the grade structure has not been as rigidly applied in the high school, particularly the four-year or senior high school, as in the grade school. Chapter 11 describes and evaluates many of the ways in which instruction has been individualized in spite of a grade structure. However, brief attention should be given to recent developments in the use of a nongraded plan at the secondary school level.

The Melbourne (Florida) Senior High School has been organized on a nongraded basis.[11] In this large three-year school the content and learning units of each subject field, except for certain nonacademic subjects which are not phased on the regular basis, are divided into five phases, rather than into the traditional grade or individual subject basis:

> PHASE ONE: Subjects are designed for students who need special assistance in small classes.
>
> PHASE TWO: Subjects are designed for students who need more emphasis on the basic skills.
>
> PHASE THREE: Materials are designed for students with average ability in the subject matter.

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[11] B. Frank Brown, *The Nongraded High School* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963).

PHASE FOUR: Subject matter is designed for capable students seeking education in depth.

PHASE FIVE: Challenging courses are available to students with exceptional ability who are willing to assume responsibility for their own learning and go far beyond the normal high school.

PHASE X: Nonacademic subjects are offered which do not permit student mobility, for example, typing and physical education. These subjects are ungraded but unphased.

The school has also developed what is called "The quest phase," which is open only to students with unusual abilities and talents and the incentive and curiosity to work at a creative level. Students are accepted for this phase only after intensive study both of their competencies and of their plans for carrying on inquiry and study under it.

Assignment to an appropriate phase of a subject is based on a searching evaluation of the student's achievement levels. Hence students at about the same level of achievement in a subject field are grouped together in a phase. It should be particularly noted that grouping is not on the basis of grade level or age, so typical of the graded school structure, nor is it based on ability, since performance on nationally standardized achievement tests is the sole basis for assignment to phases and for advancement from one phase to the next. The school recognizes that tests of intelligence and aptitude are not appropriate for classification in the nongraded school.

The Middletown (Rhode Island) six-year secondary school is also organized on a nongraded basis.[12] Its student body is composed of pupils who traditionally would be enrolled in grades 7 through 12. The curriculum content for the normal six years of schooling has been organized in sequential patterns which identify the learning experiences to which a pupil should be exposed in the subject field during his period of secondary schooling. Pupils move through the sequential units at their own rate. Hence, no pupil fails nor, on the other hand, is a poor pupil promoted. To graduate, the pupil spends six years in the school, completing as much of the curriculum as possible. An intellectually superior student may complete all the sequential units planned for a subject field before the end of the six years. He may do advanced work in the area under the direction of the staff, or he may explore another field of study. The nonacademic student probably will not complete the sequential units of a subject field, but he can graduate if he attains minimum specified achievement levels in each of the subject fields required for graduation.

The subject field of English, for example, has been organized into 111 sequential units of concepts and skills, ranging from the simplest sort of communication skill to the 111th skill, which consists of writing a full-length research paper. Six calendar years of English or an equivalent achievement are required of all pupils. In mathematics, the sequential units are composed of 63 concepts and skills, the last consisting of the calculus of elementary transcendental functions. Three calendar years of mathematics or an equivalent achievement level are required of all pupils. Other subjects are similarly organized, with the minimum level of achievement or the number of calendar years of study specified for graduation.

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[12] Sidney P. Rollins, *The Middletown Project: The Development of a Non-graded Secondary School* (Providence: Division of Graduate Studies, Rhode Island College, 1962).

Nova High School, first phase of the South Florida Education Center, also uses the nongraded plan. Content material in all subjects has been organized into sequential units in which each level is only slightly advanced over the level below it. On the basis of a series of tests and an examination of previous records, pupils are placed in an achievement group appropriate for their level.[13]

Certainly, curriculum planners are greatly interested in these promising efforts to provide more meaningful and significant educational experiences for each pupil. In the early developments of the plans the nongraded type of organization was usually superimposed on an existing graded structure, being used in only part of a school system, the remainder of the program still being organized on the old basis. Therefore, schools in the United States have not yet developed truly nongraded programs in grades K through 12, and much experimentation and trying out of this method of instructional organization still remains to be done.

If the American ideal is to educate each child to the maximum of his capabilities, potentialities, and capacities, a rigid instructional organization that consigns him to a group of children that are offered a predetermined body of content and educational experiences is not an arrangement coducive to such an ideal. Whether the nongraded plan in the form in which it has been developed up to this time should be a model for the instructional organization of the school of the future we cannot say, but we do think it represents significant advantages over the rigid grade structure of the traditional elementary and secondary school.

GROUPING OR SECTIONING PUPILS FOR CLASSROOM INSTRUCTION

Assigning pupils to class sections is one of the major and most important of all administrative responsibilities of a school faculty. Such an administrative action must be taken whenever there are more pupils enrolled for a grade or subject than can feasibly be taught as a single class. For example, if 56 pupils enroll in the first grade in a traditionally organized elementary school, and the policy of the school is to maintain a class size of 26 to 30 pupils, two class sections of the grade must be created. Similarly, if 102 students enroll for tenth-grade English in a high school, and the school has a policy that English classes should consist of about 30 pupils, the administrator of this group must schedule at least three and probably four sections of English 10. This is one aspect of the horizontal organization of the school for instructional purposes.

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[13] Arthur B. Wolfe and Nova staff members, *The Nova Plan for Instruction* (Fort Lauderdale, Fla.: Nova High School, 1964).

Sectioning Grades or Classes

Pupils may be assigned to class sections homogeneously according to designated criteria or a criterion, heterogeneously with respect to a set of designated criteria or a criterion, or in a chanceful or nondiscriminatory manner in terms of any specified criteria other than simply enrollment for the class. The basis for such grouping, or sectioning, as we prefer to call it, is one of the most-discussed questions in educational policy making in both elementary and secondary schools.[14]

Homogeneous grouping means that the school staff uses measures or qualitative judgments of one or more characteristics appropriate to the education of pupils as a basis for determining the section to which a pupil is to be assigned.

Tidwell identified twenty-five methods used in varying degrees and for different subject fields by large high schools for sectioning secondary school pupils. When homogeneity on one or more criteria is desired by the school, the bases most commonly used in English, mathematics, science, and social studies are mental ability, recommendations made by previous teachers, grades earned previously in the subject, achievement test scores, reading test scores, and choice of a program or course. In physical education and music, the sex of the students becomes an important criterion, and in specialized subject fields such as the vocational and practical areas of study, special abilities and aptitudes are important considerations.

Heterogeneous grouping or sectioning would proceed in the same manner, but pupils of varying scores, marks, or traits would be assigned deliberately to the same section so that the class would be comprised of pupils of different levels of competency as determined by each of the one or more measures used as criteria. Thus an elementary school staff may wish to section heterogeneously on the basis of mental ability. It would then select a third of the students for the room from children of high mental ability, a third from students of average mental ability, and a third from students of low mental ability. A high school choir may be composed of a specified proportion of soprano, alto, tenor, and base voices. Sections of the required twelfth-grade subject of "Modern Problems" may be composed of pupils who represent all of the planned courses or program sequences offered by the school, such as college preparatory, general, vocational, business, and homemaking.

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[14] For a brief account of the history of grouping and sectioning practices in the United States, see Charles H. Tidwell, "A Study of Grouping Practices in Large American High Schools," doctoral dissertation (Lincoln: University of Nebraska, 1959), Chap. 2; Warren W. Coxe (chm.), *The Grouping of Pupils*, 35th Yearbook, Part I, National Society for the Study of Education, (Chicago: University of Chicago Press, 1936); and Guy M. Whipple (ed.), *The Education of Gifted Children*, 23rd Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1924).

Chanceful or nondiscriminatory grouping means simply that the teaching staff of the school does not overtly and deliberately assign any pupil to a class section on the basis of any predetermined criterion except registration for the course. For example, an elementary school with ninety pupils enrolled in the fifth grade may choose simply to assign every third pupil on an alphabetical roster to a class section, or it may place the names of the ninety students in a hat and draw them out, the first thirty names drawn constituting one class section and similarly for the second section. In high school chanceful grouping usually occurs when students themselves register for a section of the class offered in the schedule. This method of sectioning is used by colleges and universities. It may result in a quite homogeneous class group on one or more criteria simply because students of comparable characteristics chose or were randomly assigned to this section.

The specialized subject program of the secondary school usually fosters a considerable degree of homogeneous grouping on appropriate criteria. The specialized subjects, by definition, are not required of all students. They are usually elected by students who have the competencies necessary for the successful pursuit of the subject, a high level of interest in the subject, and at least a fair measure of success in subjects in the same field in their previous program of studies.

Arguments for Sectioning on the Basis of Criteria. The arguments for the homogeneous grouping of students on the basis of one or more criteria are as follows:

1. Homogeneous grouping enables the school to gear the curriculum and instructional program to the capabilities and the achievement levels of its pupils. The school is better able to adapt the curriculum to the needs and competencies of individual pupils, thus individualizing instruction to a much greater degree.
2. Instruction may be more effectively planned and teaching may be more efficient and productive when the group is comparable on the basis of criteria significant for the kinds of learning experiences to be offered pupils.
3. Pupils may achieve more fully the educational outcomes sought. Since instruction and content may be adapted to the capabilities of small

groups of pupils who are comparable in desired traits, each member of the group should successfully achieve the objectives postulated for the class.

4. It fosters the development of a greater interest and better motivation on the part of students. It is believed by the proponents of homogeneous grouping that students will be better motivated, be more stimulated to undertake assignments and carry out the planned experiences of the learning units if they are working in a class section with pupils of comparable levels of competencies as determined by the criterion scores.

The arguments advanced in favor of heterogeneous grouping apply equally well in most instances to chanceful or nondiscriminatory grouping:

1. Heterogeneous grouping is consistent with the democratic ideal of equality of educational opportunity. No child is denied the same educational opportunities as his fellow students because of arbitrary assignment to a class section. (This argument, nonetheless, ignores the fact that the quality of instruction may vary considerably from section to section, depending on the teacher in charge.)
2. By modifying the curriculum and the educational experiences that children will have because of class sectioning on the basis of criteria (and there is no reason for homogeneous grouping unless the curriculum is modified), the school may be denying many children the opportunity for rich learning experiences desirable and perhaps necessary for their fullest educational development. Bloom's study[15] points out the utmost importance of the character of the environment in fostering the intellectual development of children, particularly the younger children. Schools that group homogeneously on ability or achievement criteria may be accentuating differences in achievement with highly detrimental results to the intellectual and educational development of children grouped in below-average sections.

   (Inasmuch as we have insisted throughout this book that the curriculum must be adapted to the individual potentialities and capabilities of students, it is not to be assumed that children who genetically do not have the potentialities to undertake certain kinds of educational experiences should be forced to do so. But we are suggesting that the curriculum for all children in the school, regardless of how they are sectioned, should enable each child to develop maximally regardless of what his level of achievement or his potentialities at the moment may be. Whether this can best be done by grouping homogeneously or heterogeneously on the basis of pertinent criteria has not yet been adequately determined by research.)

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[15] Benjamin S. Bloom, *Stability and Change in Human Characteristics* (New York: John Wiley & Sons, Inc., 1964).

3. Homogeneous grouping on criteria of ability or achievement may have a quite deleterious effect on the personality and emotional and social development of children, particularly those who are stigmatized as being below average or inferior on the basis of such criteria. Similarly, pupils who are designated as superior on these same criteria may develop undesirable social, emotional, and personal characteristics.
4. Heterogeneous grouping may contribute to better morale among the teaching staff.
5. Richer, more stimulating educational experiences of some types may be provided in heterogeneously or chancefully sectioned school groups. Pupils have experiences in learning to work together with other children or youth of varying social, cultural, and family backgrounds, and with children of widely varying levels of intellectual development.

One aspect of grouping practices in the elementary school is the use of subclass groups. Regardless of the plan used to assign pupils to a class section, almost all elementary school teachers subdivide the group for instructional purposes. In the teaching of reading, the teacher may, for example, subdivide the class section of twenty-six pupils into three or four subgroups. Usually these subgroups are made up of children at about the same level of achievement in the subject, but the whole arrangement is quite informal and flexible so that the teacher can readily change these subgroupings as the occasion suggests.

Validity of Sectioning Practices. The research evidence on the extent to which sectioning and grouping practices contribute to the realization of educational goals and objectives by all pupils is not at all definitive nor conclusive. In the first place, the studies *in toto* have not measured fully the extent to which pupils achieve all-important educational objectives accepted as proper and valid for schooling. Often the studies measure only a very limited number of outcomes, usually those measurable by existing standardized tests of achievement. Second, the control of pertinent variables has seldom been adequately handled in existing research studies. Third, usually the research studies measure educational outcomes under quite arbitrarily constituted class sections. Few if any research studies have tested results in the kinds of groupings that would be more diverse and more imaginative than those based on either criterion or nonselective grouping. Fourth, in many instances the instruction provided pupils in class sections after they have been grouped for instructional purposes is not the most appropriate kind of educational experiences for them, even assuming the criteria used for grouping were valid. Fifth, many studies have shown that after children have been grouped or sectioned homogeneously on the basis of one or even two or three criteria, the group still varies greatly in all other characteristics, many of which are highly pertinent to the educational development of pupils. Heterogeneity characterizes class groups on all other educational factors except those used as criteria for the grouping itself. Hence homogeneity is not a characteristic of the groups and consequently the research itself is likely to be invalid in terms of any definitive findings.[16]

On the basis of their extensive testing of about 440,000 students in 1353 carefully selected American high schools in Project TALENT, Flanagan and his associates conclude: "Twenty to 30 percent of students in grade 9 know more about many subject-matter fields than does the average student in grade 12. Variability *within* grades is greater than variability *between grades*. . . . The fact that differences in ability *within* grades are so great in comparison with differences *between* grades is a strong argument in favor of the individualization of instruction. . . ."[17]

It must be recognized, nevertheless, that homogeneous sectioning and grouping on a criterion basis is widely practiced in American education today, particularly at the secondary school level. The increased emphasis given to the acquisition of knowledge and the mastery of content, described in Chapter 5, has accentuated ability and achievement grouping, since most school faculties feel that such grouping enables pupils to achieve greater acquisition of subject matter and understanding of the principles and content of the subject field not only by superior groups of students but also by the average and the below-average groups.

James B. Conant, in his widely discussed and extensively cited studies of the American secondary school, has strongly recommended a limited type of grouping, and his support of this practice has undoubtedly contributed to its increased use at that level. But, it should be noted that he recommends only three levels of grouping, all based on achievement level in the subject field itself, and that the grouping of pupils should be subject by subject. Moreover, he does not recommend homogeneous grouping for the twelfth-grade social studies course on American problems. His three levels are "one for the more able in the subject, another for the large group whose ability is about average, and another for the very slow readers who should be handled by special teachers."[18]

On the other hand, the Commission on the Education of Adolescents of the Association for Supervision and Curriculum Development recommends that "students should be grouped in various ways in different phases of their high school experience. . . . the general education phase of an individual's schedule should be in classes that are heterogeneously grouped. . . . In the portion of the student's program that is elective the grouping should be homogeneous in terms of two factors: the pupil's intensity of purpose and his level of achievement."[19]

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[16] For an excellent brief review of research findings available up to the time of that study see Tidwell, *op. cit.*, Chap. 2.

[17] John C. Flanagan and others, *The American High-School Student* (Pittsburgh: Project TALENT Office, University of Pittsburgh, 1964), Chap. 14, pp. 2–3.

[18] James B. Conant, *The American High School Today* (New York: McGraw-Hill Book Company, Inc., 1959), p. 49.

In a report written by John I. Goodlad, the Project on the Instructional Program of the Public Schools sponsored by the National Education Association recommends that "the assignment of pupils to classroom groups should be based on knowledge about students and teachers and on understanding of goals to be achieved. Efforts to set up groups in terms of ability and/or achievement do little to reduce the over-all range of pupil variability with which teachers must deal. However, selective groupings and regroupings by achievement sometimes is useful, particularly at the secondary school level."[20]

The fundamental consideration in determining grouping and sectioning policies is the purposes and objectives of the school and of each segment of instruction. All organizational arrangements for instruction, including the grouping and sectioning of pupils, should be determined primarily on the basis of whatever procedures *in toto,* as well as structure by structure, promise to contribute most effectively to the fullest possible realization of the goals and objectives of the school by each individual pupil. Throughout the twelve years of the common school program many aspects of schooling are designed primarily to contribute to the acquisition of knowledge. Undoubtedly, wherever in the program such objectives are overwhelmingly paramount, grouping on the basis of pupil capacities to understand and master content is desirable, particularly in the secondary school; this is counterbalanced, however, by the fact that many other objectives of the school can just as well or probably more fully be achieved by grouping children on a nonselective or even a heterogeneous basis. The determination of the propriety of using one or the other of these two methods of grouping is a major educational decision, and one on which it is impossible to give a definitive answer at the present time.

Tracks. Three other matters should be considered briefly in relation to grouping and sectioning. A few schools, principally secondary schools—although the practice has been extended to elementary schools in Washington, D.C.—use a grouping arrangement called track or rail arrangements.[21] In such plans pupils are assigned to a track other than the superior or honors track. Assignment is arbitrary and is based on several criteria, usually intelligence test scores, achievement test scores, previous grade record and/or teachers' recommendations. The most superior track, usually known as an honors track, is voluntary for students who meet specified criteria. What distinguishes the track plan from other plans of homogeneous grouping is the fact that once a pupil is assigned to a particular track all his subjects fall within the scope of that track. He is enrolled only in classes attended by fellow students assigned to the same track.

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[19] Association for Supervision and Curriculum Development, ASCD Commission on the Education of Adolescents, *The High School We Need,* prepared by Kimball Wiles and Franklin Patterson (Washington, D.C.: The Association, 1959), p. 14.

[20] Project on the Instructional Program of the Public Schools, *Planning and Organizing for Teaching,* John I. Goodlad, writer (Washington, D.C.: National Education Association, 1963), p. 91.

[21] For a comprehensive description of this track plan see Carl F. Hansen, *Four Track Curriculum for Today's High School* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964); and also his *The Amidon Elementary School* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962), for the application of whole-class grouping to elementary school organization.

Throughout this discussion on instructional organization we are not considering institutional arrangements for children of exceptional educational needs that could not be properly met in the regular program of the school. Plans for the education of exceptional pupils are discussed in the next chapter.

Skills Laboratories. One other development in relation to instrumental organization of the schools is pertinent at this point. A number of schools, both elementary and secondary, have developed skills laboratories. Usually these laboratories are designed to develop skills in reading, although many of them also give attention to skill development in verbal and written communication and computation. Thelen, in an excellent description of the role of the skills laboratory, recommends that such a facility give attention to the development of skills in cooperative group work and social relationships.[22]

Such skills laboratories do not adhere to the usual grouping procedures, for they are designed primarily to help pupils develop skills, regardless of their present level of competency. Although the emphasis in many schools is on helping pupils who are deficient in one or more of these skills, some of them also have facilities to assist the average and superior student in improving his communications and computational skills.

Variable-sized Class Groups

A considerable number of secondary and a few elementary schools have been trying out various plans for instructional organization that encompass three types of development: a variable and flexible school schedule for class and individual activities; the use of teams of teachers for instruction; and variable class sizes. The first two of these developments will be discussed later, since they might better be considered in relation to other aspects of instructional organization. All three of these developments have often been aspects of a widespread revision in instructional organization and are commonly undertaken as a unified plan, but it is apparent that each could be adopted in the schools independently of the others. Popularly, these three new types of instructional organization have been labeled "The Trump Plan," since many of the tryouts and demonstration projects were developed under the aegis of the Commission on the Experimental Study of the Utilization of the Staff in the Secondary Schools of the National Association of Secondary-School Principals, of which Professor J. Lloyd Trump served as director.[23]

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[22] Herbert A. Thelen, *Education and the Human Quest* (New York: Harper & Row, Publishers, Inc., 1960), Chap. 10.

The Trump plan, in general, recommends groupings of pupils in these three sizes: small-group classes composed of fifteen or fewer pupils; large-group classes usually consisting of a hundred to perhaps three hundred pupils, although the only limiting factor is room facilities; independent study, during which time pupils work individually or voluntarily in small groups in study, resource centers, or laboratories. Although Trump and others who have sponsored the development of variable grouping plans recommend that on the average about 40 percent of the class week be spent in independent study, 40 percent in large-group instruction and 20 percent in small-group instruction, it is intended that such a division of the student's time would vary according to individual needs, programs, and progress. The three phases of instructional organization would be integrated to achieve full educational development in terms of the objectives of each subject field.

Different instructional methods would, of course, be used in the three types of groupings. Large-group instruction would be largely nonparticipatory on the part of the students, consisting principally of lectures, panel discussions, film and television presentations, demonstrations, and the like. Periods for small-group work would be devoted primarily to discussion and seminar type of activities, during which the concepts, facts, and implications growing out of the content presented to the large groups would be considered. The period of independent study would be used in a number of ways: solving problems, carrying on laboratory experiments, studying and reading in the library or a resource center, listening to tapes and recorded material, viewing films and similar types of presentations, doing creative work of various kinds, or simply systematically studying the content of the subject field. It is assumed in this plan that the teacher or the team of teachers responsible for each of the subject areas will determine the proper amount of time to be devoted to each of the three instructional aspects of the subject offerings.

Variable-sized grouping must be evaluated on the same basis as any other administrative organization for instruction: the extent to which it facilitates and enhances the achievement of educational objectives. Serious question may be raised about the propriety of large-group instruction even at the secondary school level, and about the rigidity of a plan that provides little opportunity in these large groups for taking account of individual differences. Although independent study and small-group discussion provide greater opportunities for individualization, this may not always occur because instruction is closely correlated with and dovetailed into the content presented in a predetermined structure in the large groups.[24]

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[23] J. Lloyd Trump and Dorsey Baynham, *Focus on Change: Guide to Better Schools* (Chicago: Rand McNally & Company, 1961); for descriptions of some of the experiments, see the January issues of the *Bulletin* of the National Association of Secondary-School Principals, 1958–1962.

SCHEDULING INSTRUCTIONAL GROUPS

Class Schedules

One of the new developments in secondary education, included as an aspect of the Trump plan, is variable schedules for class and individual pupil activities. Such time schedules represent modifications of the traditional short-period schedule (periods of 40–43 minutes), the long-period schedule (52–60 minutes), or the extended school period (approximately 70 minutes) used in scheduling class activities in the secondary school. Periods of variable length provide greater flexibility in organizing the instructional program of the school.

In variable scheduling the school day is divided into time modules, usually fifteen or twenty minutes in length. For example, John Marshall High School of Portland (Oregon) uses a twenty-one-module school day, each module being twenty minutes in length. The school day starts at 8:05 A.M. and formally closes at 3:10 P.M.[25]

Classes and individual activities are scheduled for one or more modules of time. Thus a large-group class may be scheduled for two or three modules, that is, forty or sixty minutes of class time. A small-group discussion class may meet for only one module, that is, fifteen or twenty minutes, on certain days and possibly for two or three modules during other days of the week. A pupil's independent study time consists of whatever remains of his assigned school day after he participates in his large-group classes and his small-group discussion sessions. In some instances, it is possible for the student to have as much as three to six or more modules of time available for independent study, and if he is fortunate enough, he may even be able to have these modules consecutively, at least for some days of the week.

Flexibility results from the fact that class groups may meet for varying numbers of modules during a school week, the team of teachers responsible for that particular subject field making the decision on what amount of time is to be spent in various types of activities. Time schedules for classes in various subject fields may also vary in accordance with the plans formulated by the faculty. Thus 200 minutes may be devoted to English, 280 to chemistry, and 160 to homemaking. Pupils' schedules must be individually determined so as to make provision in the weekly program for large-group instruction in the various subject fields as well as for the small discussion groups. In a secondary school of large enrollment, the job of preparing individual pupil schedules must be done by computers.[26]

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[24] Galen Saylor, "What Changes in School Organization Will Produce Better Learning Opportunities for Individual Students?" *Bulletin*, National Association of Secondary-School Principals (No. 275), 46:102–109 (September, 1962).

[25] John Marshall High School, *The Marshall Program: A Computer Developed Modular Flexible Schedule* (Portland, Ore.: The School, 1964).

Variable schedules are advocated as a means of better adapting instruction to the needs of pupils. Individual teachers or teams may vary the uses made of school time devoted to a subject both as to classroom activities and as to the size and nature of groups brought together for instructional purposes, since it is feasible to shift groups or the nature of pupil activities each module of schedule time. Nevertheless, a module schedule may become just as rigid and inexorable as the traditional arrangement, for a secondary school cannot organize pupils into class groups or offer a variety of subjects in the programs of study without holding fast to a time schedule of some sort. Module schedules could result in a highly divisive school day for individual pupils who must be mechanically sorted into twenty-minute slots throughout the day.

A few secondary schools have tried out other types of class schedules. Some are enthusiastic about the use of an extended class period of 70 to 105 minutes.[27] Usually, in this type of schedule classes meet for four days each week. Class sessions may be "floated" through the weekly schedule and meet at different times. The staffs of these schools feel that the longer period enables them to accomplish better results in the class period.

A double- or block-period plan of time schedule is extensively used in the junior high school, and for certain types of classes, such as vocational and laboratory subjects, in the four-year or senior high school. Block programs in general education areas are outgrowths of core curriculum plans, already discussed in Chapter 8.

Whether one class schedule plan is better than another for organizing instruction in a secondary school depends entirely on what takes place in the class period itself. No time schedule in and of itself assures rich educational experiences; the character and quality of these experiences is primarily dependent on other factors.

Generally, good elementary schools have a fairly flexible schedule for instructional activities. This continues to be true in schools that use the self-contained classroom plan, or the home-room-teacher plan for at least the portion of the day spent together. Obviously, a departmentalized arrangement requires a rather rigid time schedule for administration.

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[26] For an extensive discussion of the procedures and principles of module scheduling, see Robert N. Bush and Dwight W. Allen, *A New Design for High School Education* (New York: McGraw-Hill Book Company, Inc., 1964); and for the merits of such a procedure see Eugene R. Howard, "Modular Scheduling in the Senior High School—a Means of Improving Instruction," *High School Journal*, 48:282–288 (January, 1965).

[27] Jay W. Formsma, "A New High School with a New Look," *North Central Association Quarterly*, 37:293–297 (Spring, 1963).

Elementary school policies should encourage the homeroom teacher to exercise a great deal of discretion in carrying on the instructional activities of the homeroom class. One of the principal objections to the departmentalization of the elementary school is the rigidity it necessitates in scheduling the instructional program.

Extension of School Day and Year

Another aspect of scheduling instruction of importance in educational developments today is the extension of the hours of the school day and the length of the school year. More and more secondary schools throughout the country are increasing the length of the school day. Traditionally the high school or senior high school schedule has consisted of about a six-hour school day, although some minor variations occurred from school to school. If the school used the long-period time schedule, the school day consisted of six class periods, with twenty to thirty minutes for lunch. In the short-period plan, it comprised eight to ten periods. In recent years, a number of secondary schools have added another period to the long-period schedule and one to three other periods to the shorter class schedule. We cannot here consider programs in a school that must provide double sessions or some extension of the class periods in order to accommodate an overflow student body.

The extended school day enables pupils to enroll for more courses or to have a greater choice of courses because fewer conflicts exist. A few elementary schools have extended the school day modestly, but most educators believe that the school day as it has been developed over recent years is long enough for younger children.

The school year has been extended at both the elementary and the secondary levels by increasing the number of days constituting the regular program, and also by adding programs during the summer months. Administrative arrangements for summer programs and the nature and extent of the curriculum offered vary greatly among schools. Many of the programs at the elementary school level provide remedial instruction in basic skill courses, such as reading, the language arts, and mathematics, but in recent years the offerings have been extended considerably to include subjects designed primarily for talented pupils, such as the creative arts, music, foreign languages, science, and the like. A third type of offering is in the general area of industrial arts and craft programs. In addition, many school systems, often in cooperation with municipal authorities or a city recreation board, offer programs of a recreational and physical conditioning type.

Summer offerings at the secondary school level include five types of programs: remedial courses for improving skills; required school subjects available for students who failed them during the school year; enrichment courses of a specialized nature for talented and gifted youth, such as languages, science, social studies, English, and advanced mathematics; courses that enable pupils to develop particular skills, such as typing, graphic arts, and the like; and activities in the general area of recreation and physical education.

Some school systems have also developed other types of special summer programs for pupils, including camping experiences, group travel, work camps or community aid projects, assistanceships or apprenticeships in laboratories, shops, and offices of cooperating business and industrial firms, and more formal work experience programs conducted as a part of a vocational education program.

ASSIGNMENT OF STAFF TO INSTRUCTIONAL GROUPS

How best to use the teaching staff in carrying on the instructional program of the school has been a matter of concern, debate, and experimentation over the years.

Self-contained or Departmentalized Assignments

The traditional pattern of staff assignment in both elementary and secondary schools has been one teacher, one class. In the elementary school this meant that a teacher was assigned a class group for instructional purposes, usually remaining with that group throughout the entire school day, and for all formal instruction to be given it. This is known as a self-contained classroom. The class, generally speaking, worked independently of other classroom groups in the school, except possibly for a few common activities that might be sponsored by the school, such as a music group, school assemblies, programs for parents, and similar minor endeavors. However, a number of schools over the years experimented with other arrangements, usually modest abridgments of the self-contained classroom plan.

In more recent years, demands have been voiced by both educators and parents for modifications of the fully self-contained type of organization, so that at least some of the instructional responsibilities for the class would be shared with specialists in particular areas of study. Usually the first break in the self-contained plan was the assignment of specialized teachers in physical education, music, and/or art to the elementary school staff. These staff members were given the responsibility of either teaching their specialty with each appropriate class group or supervising and assisting the teacher in directing that aspect of the curriculum. In some instances, the specialized teacher devoted only a part of his time to the specialty, working with his own class group for the remainder of the day; in others, such teachers would be assigned to more than one school so they could devote full time to the teaching of their field. In such modest modifications of self-containment, the home-room teacher retains responsibility for the education of the group; hence such an arrangement still remains a self-contained class.

With increased emphasis on new content and the development of a new organization of subject matter in some fields, particularly science and mathematics, some schools began to add specialized teachers for one or more of these subjects, adopting a departmentalized plan of instruction in which the instruction of a group of pupils becomes the joint responsibility of two or more teachers. Staff assignment in elementary schools has become a problem in recent years only to the extent that classrooms are self-contained or departmentalized. Usually the question of departmentalization is one of degree, for few elementary schools, particularly at the upper-grade levels, are fully self-contained or completely departmentalized. Dean reports that 76.5 percent of the elementary schools in 1958–1959 use the plan of "one teacher responsible for the total program, with assistance in the special subjects," in grades 1 through 6; 9.9 percent report partial departmentalization and only 0.7 percent complete departmentalization of the entire school. For grades 7 and 8, when included in the elementary school organization, 39.0 percent report complete departmentalization, 32.7 percent partial departmentalization, and only 19.5 percent report "one teacher responsible for the total program with assistance in the special subjects."[28]

In the secondary school the teacher has always been assumed to be a specialist in the subjects he taught. In reality, this, of course, has not been true, particularly in the multitude of small schools that exist throughout rural America. And even in urban high schools, many teachers have subject assignments in fields in which they lack a great deal of being a specialist.[29]

Team Teaching

At the present time a new arrangement for assigning staff members to instructional groups, known as team teaching, is being used by an increasingly larger number of both elementary and secondary schools throughout the United States. Team teaching is a plan for organizing and assigning members of a school staff in which two or more staff members are responsible for cooperatively planning and carrying on the classroom activities and educational experiences of a group of pupils, including decisions by team members as to the particular instructional responsibilities of each member of the team and the class groupings in which pupils assigned to the team shall be placed for such instruction. The team may consist of different categories of staff personnel, including a team leader and one or more senior teachers, teachers, interns, teacher aides, clerks, instructional materials specialists, or other functionaries. The instructional responsibilities of the members of a team vary in accordance with staff function, professional specialization and competency, and personal interest and desire.

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[28] Dean, *op. cit.*, p. 30.

[29] National Council of Teachers of English, *The Continuing Education of Teachers of English: A Report of the State of the Profession, 1964* (Champaign, Ill.: The Council, 1964); and *Secondary School Science and Mathematics Teachers: Characteristics and Service Loads,* (A Report of a Survey for the National Science Foundation; Washington, D.C.: Government Printing Office, 1963).

Teaching teams are used in both the elementary and the secondary schools. Although considerable variation exists in team-teaching arrangements, a team-teaching plan should not be confused with other plans of staff assignment in which teachers simply share instructional responsibilities for a group of pupils. A team-teaching plan differs from other plans of assignment in the nature and composition of the team itself, the ways in which it works together as a cooperating group, and the ways in which the instructional periods and the responsibilities for conducting them vary from time to time, depending on the purposes and nature of the curriculum units being developed with the student body assigned to a particular team.

At the elementary school level, the plan developed by the Lexington (Massachusetts) schools has served as a model for team-teaching arrangements. The plan is shown in Figure 13. Each of the three teaching teams shown in the illustration is responsible for the pupils assigned to two grade levels. The specialists in physical education, art, and music serve two elementary schools and are available for work with the teams as desired.

A number of different arrangements for organizing teaching teams at the secondary school level is possible.[30] In its simplest form two teachers, for example, who have classes in algebra scheduled at the same period may work together as a team in planning and carrying on instruction for the 55–60 pupils. They may be able to use aides in making and using instructional materials, and they may regroup the pupils during the scheduled period in any way desirable. In a more complex plan, the entire staff in the subject fields of mathematics and science, together with clerks, laboratory assistants, instructional materials specialists, interns, and student teachers may comprise a team. This group would be responsible for planning the entire instructional program for the stu-

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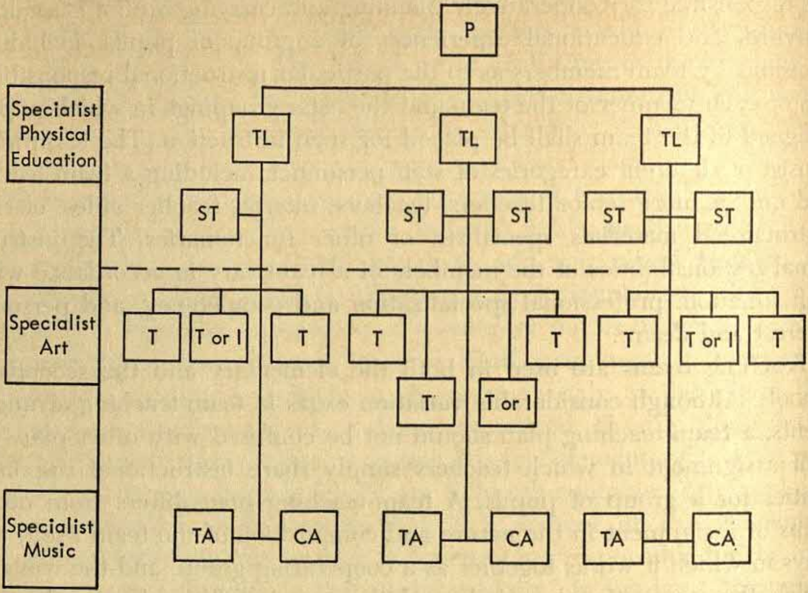
[30] John A. Brownell and Harris A. Taylor, "Theoretical Perspectives for Teaching Teams," *Phi Delta Kappan*, 43:150–157 (January, 1962); and Claremont Graduate School, *Claremont Team Teaching Program, Annual Report, 1962–1963* (Claremont, Calif.: The School, 1964), pp. 5–9.



The Lexington Team Structure.
P: Principal; TL: Team Leader; ST: Senior Teacher;
T: Teacher; I: Intern; TA: Teacher Aide; CA: Clerical Aide.

Figure 13: The Organization of Teams in an Elementary School
Source: From *Team Teaching,* edited by Judson T. Shaplin and Henry F. Olds, Jr. Copyright © 1964 by Judson T. Shaplin. Reprinted with the permission of Harper & Row, Publishers.

Team Leader (TL)

An experienced, mature, master teacher of unusual talent, who has had extensive teaching experience, who possesses at least a master's degree, who has had training in supervision and human relations or educational sociology, and who is a specialist in an area of elementary education. Furthermore, this person would have demonstrated satisfactorily ability to work with teachers in a leadership role. It is anticipated that about one-third of this person's school day might be released for such purposes as observation and training of subordinates, planning, curriculum development, research and evaluation, and parent relations.*

Senior Teacher (ST)

An experienced, mature person with above-average talent comparable to the well-regarded career teacher today. In addition, this person would have some degree of specialized competence in a particular area. This is seen as a terminal role, though it may lead to the position of team leader.

Teacher (T)

This category is seen as including two types of personnel:

1. competent, experienced teachers of broad general training, and
2. teachers of relatively little experience.

The status of this position is regarded as equal to the status of the typical teacher today, For many teachers this represents a terminal role.

Intern (I)

A trainee in a program of teacher education doing full-time supervised teaching in the school. The work of the intern is usually directed by a senior teacher working with the college supervisor.

dent body of the school in all subjects offered in these two fields, subject, of course, to school-wide planning and school policies. The team, under its leader, would decide teaching assignments day by day, and week by week, the general nature of the content to be taught or the learning experiences to be provided each class group, subgrouping of pupils enrolled in these subjects to be made, guest speakers and other specialists outside team membership to be used, and similar instructional matters.

Although team teaching, variable-sized classes, and variable time schedules were all incorporated as aspects of one major plan for the reorganization of instruction—a movement fostered by the Trump Commission—they should not be regarded as inseparable developments. Each of these arrangements may be used independently or with traditional approaches. In fact, team teaching, for example, is often used in schools adhering to a traditional fixed period schedule; variable class sizes may readily be used in just such a schedule also.

Its proponents claim several advantages to be derived from team teaching:

1. A greater degree of excellence may be achieved in the educational program.
2. Teachers as well as noncertificated personnel may be used more efficiently and effectively.
3. The specialized talents and competencies of the staff are utilized more fully, and teachers are encouraged to develop to even a higher degree their competencies in specific aspects of instruction and subject matter.
4. In organizing instruction greater flexibility as to the composition of class groups, the time schedule, and the methods of instruction is achieved.
5. Teachers in preparation as interns or student teachers and newly cer-

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Teacher Aide (TA)

A mature person who enjoys direct contact with children. A teacher aide does not qualify as a teacher but can supervise or work with pupils in noninstructional situations: e.g., supervise bus arrivals and departures, recess and lunch periods; operate mechanical aids to instruction; do housekeeping tasks; correct objective tests. Specific tasks are defined by the particular demands of each team.

Clerical Aide (CA)

A person for whom no professional preparation is necessary. This person assists with the routine, nontechnical aspects of team operation: typing, duplicating, filing, and recording attendance.

[*] Experience during the first five years suggests that persons are more likely to succeed in the leader role if they possess these skills and qualities: (1) ability to initiate structure in the situation, as appropriate; (2) the quality of being considerate of others, as appropriate; (3) extraordinary knowledge of the learning process and educational goals; (4) artful talent in applying this knowledge and in selecting appropriate leadership behaviors for specific situations.

tificated teachers may participate in a set of teaching experience that contribute greatly to their professional development.

6. The use of noncertificated personnel for routine or nonprofessional activities in the school releases teachers for more significant activities.
7. Teachers may have more time for planning and study.
8. The school is better able to keep the content of its curriculum and teaching methods abreast of current developments in curriculum planning and of the expansion in knowledge.

Some shortcomings of team teaching and the problems in its use are also evident:

1. The plan may encourage teachers to give undue emphasis to the mastery of content and the acquisition of subject matter to the neglect of other major objectives of the school.
2. No teacher may have the responsibility for maintaining a close personal relationship with a pupil so that the influence of a teacher on the social, emotional, and character development of a child or adolescent may be minimal.
3. The hierarchical organization of the teaching staff, particularly in elementary schools, may result in some discontent and loss of morale among teachers.
4. Although it is not necessarily a feature of the plan, team teaching, especially at the secondary school level, often results in a considerable amount of large-group instruction, which in itself has shortcomings, as well as advantages, as an instructional method.
5. The scheduling of class groups and the assignment of teaching responsibilities, especially in plans that set up large teams, may become so involved and be done so arbitrarily that rigidity and inflexibility actually result, with pupils and teachers being shunted about in a highly mechanistic manner.
6. Some schools may use a team-teaching arrangement as a means of increasing the pupil-teacher ratio in the school, thus reducing further the opportunities for individualization of instruction and for a teacher to work closely and intimately with a group of pupils for an extended amount of time during a school year.

PRINCIPLES FOR THE INSTRUCTIONAL ORGANIZATION OF THE SCHOOL

In concluding a consideration of the organization of the elementary[31] and secondary school for instruction, and, hence, for the carrying out of the curriculum plan, we suggest these principles for the guidance of curriculum workers:

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[31] For further statements on the organization of elementary schools see George Manolakes, *The Elementary School We Need,* A Report of the Commission on Elementary Curriculum, Association for Supervision and Curriculum Development; (Washington, D.C.: The Association, 1965).

1. The maximum development of the human potentialities of each child will, as shown by recent significant research studies, be possible only if he is living in a rich, stimulating cultural, social, and emotional environment from the earliest months of life. Although the school itself is not responsible for controlling the environmental conditions of preschool children, educators should insist that the community make provisions through school-related agencies or other institutions for such favorable conditions when the child's family fails to do so. Also, the school, singly or in cooperation with other appropriate agencies, should make suitable educational activities available when the school is not formally in regular session. Two laws have been enacted by the Congress of the United States, the "Economic Opportunity Act of 1964" (Public Law 88-452) and the "Elementary and Secondary Education Act of 1965" (Public Law 89-10), that provide substantial amounts of federal funds for the support of projects of various kinds that will provide more adequate educational opportunities for children of low-income families. Under the provisions of the two Acts local educational and community agencies may receive grants for the operation of special programs for preschool aged children as well as for children and youth enrolled in school and for youth who have dropped out of school. These efforts by local authorities and state and national agencies can do much to provide better cultural, social, and educational opportunities for many deprived boys and girls throughout the United States.
2. The school must be organized for the instruction of pupils, but all institutional arrangements and structure should be as flexibly administered as is possible in group schooling.
3. Administrative actions in the establishment and location of schools, the determination of those eligible to attend a particular school, and the division of the school program into levels of instruction should be made with due regard for costs in relation to excellence of the schooling obtained, the distance to be traveled by pupils, and the maintenance of unity among the people of a sociological community or neighborhood:
   a. The school should be large enough to offer a comprehensive and adequate program of education for those enrolled, and to provide the educational services desired, yet not so large as to make size itself a deterrent to the attainment of excellence in the educational program.
   b. The system should bring together into one student body in each school plant as diverse and heterogeneous a school population as can be done feasibly in terms of physical rather than human factors.

4. Each school building, regardless of location, level, or size, should be staffed with an administrator, clerks or aides in sufficient number to do the routine work of the school, including nonprofessional duties and activities of an instructional nature, and a service staff sufficient to provide the desired services not made available to the school in sufficient amount by a central school staff.
5. The system of schools established by the society should provide for a continuous, unbroken program of education from the earliest years of formal schooling to the completion of the program of common education provided at public expense. Recognizing that the system of schools will be subdivided into institutions of various levels of schooling, such institutional arrangements should not result in unnecessary interruptions in the program of education for individual pupils, erect artificial barriers that deny some pupils access to appropriate types of education, or result in inaccessibility of educational opportunities at any level for particular groups of children.
6. Each pupil and his family should be well known by at least one staff member of the school. In the elementary school this will usually be the teacher of his self-contained classroom or his homeroom teacher, who works with him for extended periods of time each day. In junior and senior high schools it will be a counselor.
7. The organization and the curriculum plan of the school should enable each pupil to participate in educational experiences in each field or area of study and at each level or year of school appropriate for his own individual level of capabilities, maturity, and experience, due account being taken so that all important aspects of growth and development and all significant educational goals are served fully. When these factors are carefully considered, rigid types of grouping and arbitrary methods of advancing pupils through the school are avoided, and pupils work with fellow pupils of diverse talents and potentialities and in a variety of group arrangements.
8. At least one professional staff member should be responsible for planning and guiding the education of a pupil, making certain that during his school career the pupil will have an opportunity to achieve as fully as possible all important educational objectives appropriate for him. In the elementary school, this person will be a homeroom teacher who has him in class for a considerable portion of the school day. This teacher should be a specialist in human growth and development, in educational and curriculum planning, and in at least some of the subject fields or areas taught. In the junior high school it should be both a homeroom or block-period teacher and a counselor; and in the four-year or senior high school, a counselor. Such counselors should be specialists in psychology and educational planning, understanding thoroughly the aims and objectives of the school, and the curriculum elements necessary for their realization.

9. The teacher of the homeroom or self-contained classroom of an elementary school should have the assistance of other teachers who are specialists in particular aspects of curriculum in which the homeroom teacher is not. These staff persons should then plan together cooperatively for the education of the group of pupils assigned to the homeroom teacher, who should retain responsibility for the total development of each pupil in the group.
10. Inasmuch as the function of the school is to provide an educational program that contributes as fully as possible to the attainment of all important educational objectives by each pupil, grouping of pupils for instructional purposes should be solely to facilitate the achievement of important segments of these objectives, and groupings used on one occasion should not prevent the use of other groupings desirable for the achievement of yet other objectives.
11. A teacher should be a specialist in one or more aspects of schooling, be it as a teacher of a self-contained classroom in the elementary school, a teacher of a subject field in an elementary or secondary school, or a director of a school service. The teacher's assignments and responsibilities for instruction should take due account of such specialized abilities, but not to such an extent as to interfere seriously with the application of other principles of instructional organization cited here.

FOR FURTHER STUDY

ANDERSON, ROBERT H. "Organizational Character of Education: Staff Utilization and Deployment," *Review of Educational Research,* 34: 455–469 (October, 1964).

A succinct summary of research and articles on a number of aspects of organizing schools for instructional purposes. An extensive bibliography is included.

BEGGS, DAVID W., III, ED. *Team Teaching.* Indianapolis: Unified College Press, Inc., 1964.

Descriptions of team-teaching plans for elementary schools and junior and senior high schools, and chapters on the nature and use of team teaching.

BROWN, B. FRANK. *The Nongraded High School.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963.

A description of the program in the best known of the nongraded secondary schools.

BUSH, ROBERT N., AND DWIGHT W. ALLEN. *A New Design for High School Education.* New York: McGraw-Hill Book Company, Inc., 1964.

Describes in detail methods that may be used in secondary schools to provide a flexible pupil schedule. Illustrates methods of making such schedules.

"Cooperative Teaching," *The National Elementary Principal,* Vol. 44, No. 3, January 1965.

This special issue contains a number of excellent articles on team teaching in the elementary school. Ways in which team teaching may best be used, plans for organizing teams, and procedures are discussed.

Dean, Stuart E. *Elementary School Administration and Organization.* Bulletin 1960, No. 11, United States Office of Education. Washington, D.C.: Government Printing Office, 1960.

Reports the findings of an extensive national survey of practices and policies in the organization of the school for instruction.

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McNeil, John D. *Curriculum Administration.* New York: The Macmillan Company, 1965.

Considers matters of organization, development, and administration of the curriculum. Synthesis of knowledge about learners, subject matter, and society needed by curriculum workers.

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A significant report on the organization of schools for instructional purposes. Makes specific recommendations, with supporting views.

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Leaders in the development of team teaching define the concept, analyze various plans, and make recommendations.

United States Office of Education, Division of Elementary and Secondary Education. *A Guide to Research and Informed Judgment on Grouping Children.* Education Briefs, No. 40. Washington, D.C.: Government Printing Office, 1964.

A compilation of many points of view and research findings on grouping. Extensive bibliography of studies and reports.

Wiles, Kimball. *The Changing Curriculum of the American High School.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963.

Part II analyzes the various elements of the curriculum, including the course program, guidance services, and student activities. Part IV depicts the kind of high school that should be developed in the future.

Wright, Grace S., and Edith S. Greer. *The Junior High School.* Bulletin 1963, No. 32, United States Office of Education. Washington, D.C.: Government Printing Office, 1963.

A national survey of instructional organization practices in junior high schools. Extensive useful information is provided.

CHAPTER 11

Curriculum Differentiation for Individual Learners

To a considerable degree the history of the American school curriculum revolves around one central question: How can the curriculum best provide for the educational needs of each learner? As these needs have been viewed differently and especially as the school population has become almost the entire population of children and youth, many practices have been introduced to improve the provisions for individual learners.

THE DILEMMA OF THE INDIVIDUAL IN MASS EDUCATION

Throughout much of our national history a uniform curriculum was considered adequate for all. Even in the eighteenth century, however, such innovations as the academy aimed to provide differentiated education. In the nineteenth and especially the twentieth centuries, new knowledge about individual differences, along with the ever-mounting school population, has created the great dilemma of curriculum planning: How educate *all,* and at the same time educate *each* individual well? This question and its resolution were sharply and clearly stated in the 1958 Rockefeller Brothers Fund Report on Education:

> Not only must our educators handle a high increase in the number of students; they must offer higher quality in education. From time to time one still hears arguments over *quantity* versus *quality* education. Behind such arguments is the assumption that a society can choose to educate a few people exceedingly well *or* to educate a great number of people somewhat less well, but that it cannot do both. But a modern society such as ours cannot choose to do one *or* the other. It has no choice but to do both. Our kind of society calls for the maximum development of individual potentialities *at all levels.*
>
> Fortunately the demand to educate everyone up to the level of his ability and the demand for excellence in education are not incompatible. We must honor both goals. We must seek excellence in the context of concern for all.[1]

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[1] Rockefeller Brothers Fund, *The Pursuit of Excellence: Education and the Future of America,* Panel Report V of the Special Studies Project (New York: Doubleday & Company, Inc., 1958), p. 22.

As the range of abilities, special talents, aspirations, social status, and home backgrounds in the school population widen, the complexities of the curriculum dilemma deepen. In general each approach to solving this problem has been initiated in order to serve better some special group of individuals within the expanding school population. At one horn of the dilemma there is the tremendous task of providing adequate common learnings for the many millions of pupils in kindergarten through grade 12, and at the other the even more perplexing matter of providing for each of these children and youth experiences especially related to his own abilities and needs. The present chapter is devoted to the matter of curriculum differentiation for each child and youth; Chapter 2 dealt with the general influence of knowledge about pupils on the curriculum and its planning.

Part of the dilemma of individualization is the extreme difficulty encountered in attempts to categorize individuals. Because of the large number of pupils involved in the educational program, concern for individual differences is usually expressed in terms of "slow learners," "the gifted," and so forth. Yet, as we shall see, individuals simply do not fall discretely into such groupings; for example, pupils who are slow learning in some, perhaps nearly all, areas may be gifted in at least one, and gifted pupils may have their areas of weakness, too. Hence we believe that most approaches to differentiation of the school program which rely on discrete categories of individual learners fail to achieve their purposes for some learners. We tend, therefore, to see real curriculum differentiation not as a series of programs for different groups of learners, but as a pattern of curriculum plans which free teachers and pupils to work out for each individual the specific experiences having optimal value for him. To develop this thesis more fully, we need now to give somewhat detailed attention to the various current efforts to categorize individuals and the several administrative approaches to differentiation of the school program. Final sections of this chapter are devoted to the more significant differentiation which we regard as individualization of instruction.

CATEGORIZING LEARNERS FOR CURRICULUM DIFFERENTIATION

The many efforts to categorize children and youth in school in terms of individual differences are based on a variety of different but still overlapping factors. Probably the factor which has been most commonly and longest employed is that of learning ability or intelligence. By application of this criterion, groups are identified as mentally retarded, slow learning, average, fast learning or academically talented, and gifted.

Another factor has been utilized with the emergence of great developments in the field of education for exceptional children: the marked deviation from some norm of physical status and development. Indeed, educators in the field of education for exceptional pupils see all their programs as based on a conception of deviation from the norm. Thus in their thoroughgoing treatment of special education Dunn and others defined exceptional pupils as "those (1) *who differ from the average to such a degree in physical or psychological characteristics,* (2) *that school programs designed for the majority of children do not afford them opportunity for all-round adjustment and optimum progress,* (3) *and who therefore need either special instruction or in some cases special ancillary services, or both, to achieve at a level commensurate with their respective abilities.*"[2] This criterion applied to physical status and development creates special groups of those with speech disorders, hearing impairments, visual limitations, and nonsensory physical impairments, including those who are crippled and those with chronic health problems.

A third factor frequently used in categorizing learners for curriculum differentiation is socioeconomic background. Thus great concern is increasingly manifested for learners who come from relatively limited socioeconomic backgrounds and who are categorized by such terms as "culturally deprived," "disadvantaged," and "economically limited." When such groups are identified there is also an implicit categorization of other pupils coming from more favored backgrounds as the "advantaged" ones.

Another categorization is sometimes attempted on the basis of the related factors of overt behavior and emotional stability. Those who apply only the criterion of overt behavior are likely to group pupils showing behavior problems as "predelinquent" or "delinquent," or simply as "problem children." Categories based on the study of behavioral problems are more likely to be labeled "socially maladjusted" or "emotionally disturbed."

Finally, a factor widely employed in secondary schools is the assumed probable destination of pupils. Thus the group most commonly identified as "college preparatory" has long been given preferential treatment in the development of the high school curriculum. Even in Franklin's 1749 proposal for the establishment of an academy at Philadelphia, however, there was recognition of the need to provide education for learners who would terminate their formal education in the secondary school. This group has been variously categorized as "noncollege-bound," "vocational," and "terminal." In the twentieth century especially, and to a marked extent in the late 1950's and early 1960's, citizens and educators have become greatly concerned with the youth who leave high school before completion—the "dropouts."

A major problem in categorization is the great overlapping among categories. Thus even in our most conventional and firmly fixed classifications of individuals by ability, new findings in the fields of intelligence measurement and learning have called attention to grave fallacies in attempts to classify individuals according to the ability to learn.

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[2] Lloyd M. Dunn (ed.), *Exceptional Children in the Schools* (New York: Holt, Rinehart and Winston, Inc., 1963), p. 12.

We ourselves cannot be satisfied that each type of deviation from "normality," whatever that is, is so much like similar deviations in other individuals and so distinct and separate from other types of deviations as to make possible clear-cut, completely separate educational programs for any one category of deviation. At the same time we would be among the first to recognize the inappropriateness of any one uniform pattern of learning experiences for all pupils. Furthermore, common sense and the facts of dollars and cents force us to admit that an educational program cannot be completely tailor-made for each individual learner. Thus we accept as inevitable the conclusion that various categories of individual learners need to be identified and carefully studied. We would further support as worthwhile the development of multiple types of programs that seem, or are proven, most likely to aid individuals in each defensible category. Especially desirable are a philosophy of individual differences and a curriculum which assigns no learner to a category that limits rather than frees the possibilities of providing experiences which will help him achieve his optimum potentiality. We like very much, for example, the following objective of the Winnetka Public Schools:

> These schools are heavily committed to the reality of individual differences. Placing high emphasis upon the consultative resources of the school psychologist, teachers must seek constantly the ways in which individual pupils can release their powers and competencies. Not only in the field of academic learning, but in art, music, construction, drama, leadership, social responsibilities, speaking, writing, mechanical aptitudes, and in many other ways children can find fulfillment. We want children with extreme needs, such as in the case of the very swift learners, and the talented, or those with physical or mental handicaps, to find maximum opportunities for success. We want them to know and understand beauty and creativity, and have a beginning understanding of the human spirit.[3]

It may now be useful to review a few of the more common categories of individual differences with which curriculum planners are concerned. Such a review may aid in identifying current types of differentiation for individual learners and also support our thesis that categorization is difficult if not at times unwise.

Academically Talented

No group of learners received more attention in the late 1950's than those in the upper 15 to 20 percent of the IQ distribution. In February, 1958, the National Education Association convened some two hundred educators and laymen in Washington, D.C., to consider problems involved in the identification and education of the academically talented pupil. This conference, which was chaired by James B. Conant, was limited to "considerations of the secondary school, boys and girls whose academic ability, developed or potential, place them about one standard deviation above the mean for their age mates, and to the subject areas of English, mathematics, modern language, science and social studies."[4] In his introduction to the report of this conference, Conant explained that the conference was discussing the "education of not more than a fifth of the secondary school population of the country" and noted, "What is needed, most of us feel, is a careful consideration of the secondary school education of all those boys and girls who have the ability to study effectively and rewardingly advanced mathematics, foreign languages and tough courses in chemistry and physics."[5]

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[3] Winnetka Public Schools, *Beliefs and Objectives of the Winnetka Public Schools* (Winnetka, Ill.: The Schools, September, 1961), p. 8.

Much of this conference dealt with curriculum differentiation for the academically talented. The group on "Guiding the Education of the Academically Talented Pupils in American Secondary Schools," sounded a caution about too rapid and too categorical provisions for the academically talented through rigid stereotyping and scheduling procedures, adding, "Acting on the assumption that academically talented pupils will have an appropriate secondary education if they are scheduled into 'five solid subjects' will result in a somewhat naïve oversimplification of the many problems involved in selecting and organizing learning experiences."[6]

Subsequent to this national conference it sponsored, the National Education Association conducted the NEA Project on the Academically Talented Student, which through publications and conferences brought many significant practices and proposals to the attention of educators. The publications included reports on several subjects (mathematics, science, English, modern foreign languages, social studies, music, and art) for the academically talented student in secondary schools; on administrative and guidance provisions for these students; and on research and elementary education in relation to academically talented students.

The studies that Conant himself reported in *The American High School Today*, and in subsequent volumes, focused more attention on the academically talented. For example, Conant's Recommendation 9 departed strongly from the conference conclusion cited above and also from Conant's own Recommendation No. 2 about individualized programs without "clearly defined and labeled programs or tracks":

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[4] James B. Conant (chm.), *The Identification and Education of the Academically Talented Students in the American Secondary School* (The Conference Report; Washington, D.C.: National Education Association, February, 1958), p. 5.

[5] *Ibid.*, p. 16.

[6] *Ibid.*, pp. 66–67.

> A policy in regard to the elective programs of academically talented boys and girls should be adopted by the school to serve as a guide to the counselors. In the type of school I am discussing the following programs should be strongly recommended as a minimum:
>
> Four years of mathematics, four years of one foreign language, three years of science, in addition to the required four years of English and three years of social studies; a total of eighteen courses with homework to be taken in four years. This program will require at least fifteen hours of homework each week.
>
> Many academically talented pupils may wish to study a second foreign language or an additional course in social studies. Since such students are capable of handling twenty or more courses with homework, these additional academic courses may be added to the recommended minimum program. If the school is organized on a seven- or eight-period day (Recommendation 12), at least one additional course without homework (for example, art and music) may also be scheduled each year.[7]

Generally speaking, the provisions made for the academically talented correspond rather closely to the recommendations by Conant just cited. The 1961 report of a survey by the United States Office of Education of a sampling of a 1958 graduating class of public high schools showed that five times more of the more able students than the less able were enrolled in college preparatory curriculums.[8] The program of the median pupil in the academically able group (upper 25 percent) included 3¼ to 4 credits in English; 2¼ to 3 credits in social studies; 2¼ to 3 in mathematics; 1¼ to 2 in science; and 1¼ to 2 in a foreign language for a total of 10½ to 14 credits. The one significant difference with the Conant recommendations is in the modern foreign-language field.

A real concern over the identification and programs of academically talented students is the obvious tendency in many high schools to confuse a traditional college preparatory program of studies with fundamental curriculum differentiation for academically talented learners. Real ability to learn should not be stymied, we believe, by uniform standards as to the number of credits, or the number of hours of instruction, in a few restricted fields. These learners, certainly as much as any others, need full freedom to explore in depth the areas of their greatest talent. Even if his area is one of those prescribed in the conventional college preparatory curriculum, the individual learner is hindered by the schedule and requirements which make it impossible for him to take more than four credits, for example, in the chosen field. And if all his time is required for the prescribed areas, he may well be denied the opportunity to develop his competence in fields outside those prescribed. Furthermore, an arbitrary standard of an IQ of 115, for example, as a cutoff point for those admitted to the college preparatory program may severely limit the opportunities available to youth who have potentially far greater academic talents than test scores reveal. Many culturally deprived learners may have as great academic talents as those whose cultural background enables them to make much better scores on intelligence and achievement tests. Again, classification of learners on a particular factor does not necessarily aid differentiation for all learners.

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[7] James B. Conant, *The American High School Today* (New York: McGraw-Hill Book Company, Inc., 1959), p. 57.

[8] Edith S. Greer and Richard M. Harbeck, *What High School Pupils Study*, U.S. Office of Education Bulletin 1962, No. 10 (Washington, D.C.: Government Printing Office, 1962), p. 339.

The preceding statement of point of view is perhaps more generally accepted by educators at the elementary school level than at the secondary. The publication of the NEA Project on the Academically Talented Student produced in conjunction with the Department of Elementary School Principals, NEA, stated this point of view, for example: "Provisions for able children should never become a substitute for quality education for all or a device for rescuing those with special talents from a program which is not good for anyone. Provision for the academically talented must grow out of a good program for all children. It is a never-ending process of improved teaching and learning."[9]

Culturally and Economically Disadvantaged

Educators have long been aware of the great differences between the motivations and school success of lower and higher social class groups in America. Much as we may like to deny the existence of social classes, the plain and obvious fact is that extreme differences exist in the cultural opportunities readily available to our citizens when viewed on a continuum of social class as determined at least in part by family income and place of residence. James B. Conant forcefully called this problem to widespread lay and professional attention in his 1961 publication, *Slums and Suburbs*. He wrote this book, Conant said in his Introduction, because

> . . . I am convinced we are allowing social dynamite to accumulate in our large cities. I am not nearly so concerned about the plight of suburban parents whose offspring are having difficulty finding places in prestige colleges as I am about the plight of parents in the slums whose children either drop out or graduate from school without prospects of either further education or employment. In some slum neighborhoods I have no doubt that over a half of the boys between sixteen and twenty-one are out of school and out of work. Leaving aside human tragedies,

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[9] David C. Sanders, *Elementary Education and the Academically Talented Pupil*, NEA Project on the Academically Talented Student and Department of Elementary School Principals (Washington, D.C.: National Education Association, 1961), pp. 9–10.

> I submit that a continuation of this situation is a menace to the social and political health of the large cities.[10]

The following year the Educational Policies Commission published its statement on *Education and the Disadvantaged American.* The two publications dealt essentially with the same group of individuals, although Conant's work tended to identify the individuals more by race and slum dwelling, whereas the EPC report related "disadvantage" to the migrant population from the South, the Southwest, and Puerto Rico that settled in large urban centers. The problems of these "disadvantaged" Americans as recognized by both Conant and the commission as well as by other observers, are well described in the following paragraph from the EPC statement:

> In this migration, the tragic inadequacy of old cultures for new needs continues to exact its toll. In the cities as on the farms, jobs for the unskilled are decreasing, and the migrants are less able than are better educated persons to be trained for skilled positions. They have little of the understanding required of wise consumers. Often they and their children reject schooling. Inferior and overpriced housing further handicaps their health, education, and ability to support themselves. By misuse of property, they may further impair their living conditions. Their residential concentration multiplies their problems and retards the learning of new ways. Mistrust of government and civic apathy also hinder their adaptation. Racial discrimination compounds the difficulties of many. Poverty and disease continue to plague them, delinquency and crime rates rise; and the society at large appears remote and uninterested.[11]

Other data and observations, however, are conclusive that disadvantage in educational opportunities is not confined to slum dwellers and to those who have recently migrated to large cities. The study by Havighurst and others, *Growing Up in River City,* which followed youngsters from about eleven years of age to twenty years in a midwestern city of about 45,000 population showed clearly the importance of family and economic background:

> The boys and girls who achieve well in school generally are those who have the advantage of families that help them and stimulate them to do good school work, in addition to their average or superior mental ability. They also get along well with other boys and girls. In this, as in so many other things, the biblical parable of the talents is borne out. "Unto everyone that hath shall be given, and he shall have abundance,

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[10] James B. Conant, *Slums and Suburbs: A Commentary on Schools in Metropolitan Areas* (New York: McGraw-Hill Book Company, Inc., 1961), p. 2.

[11] Educational Policies Commission, *Education and the Disadvantaged American* (Washington, D.C.: National Education Association, 1962), p. 5.

but from him that hath not, even that which he hath shall be taken away."[12]

Various programs for the culturally and economically disadvantaged have been developed. Some of these, especially those at the preschool and primary levels, are essentially preventive, aiming to overcome some of the limitations of the child's environment so as to help him succeed in school, but most programs are primarily remedial, seeking to help these pupils acquire or improve skills in reading. More comprehensive approaches involve substantial curriculum revision, development of new instructional materials appropriate to culturally disadvantaged learners, work-study arrangements, and parent education. An essential element of these programs was described as follows in the Educational Policies Commission's statement:

> A program based upon an understanding of each pupil is a program which challenges each to try and within which each can experience a fair measure of success and failure. Success encourages self-respect, stimulating the pupil to further progress to a higher level of aspiration.[13]

The "Higher Horizons" project of the New York City schools has received wide recognition as one ambitious effort to raise the aspirations and scholastic attainments of disadvantaged and culturally deprived children. In 1963, this project was reaching 52 elementary schools, 13 junior high school pupils, and 11 high schools enrolling more than 64,000 pupils, an added cost to the New York City Board of Education of $3,800,000 or $61 a pupil. This project simply attempted to provide more and better experiences and services for the children included in the experiment. Described by the coordinator of the program in a 1963 report to the New York City Board of Education as "compensatory education," the program was illustrated by the following description of the staffing of two schools, each with about 860 pupils:

> School A, in the middle-class residential area, has 25 classroom teachers, a reading teacher, a teacher of health education, an assistant-to-principal, and a principal—a total staff of 29. School B, operating under the Higher Horizons project, has a staff of 52.5 of whom 32 are classroom teachers. Other members of the staff deal with such matters as academic and cultural enrichment, remedial reading, guidance and library services. Seven of the extra teachers assist other teachers during the regular day session and in afternoons, between 3 and 5 o'clock, carry on a specialized group-work program.[14]

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[12] Robert J. Havighurst, Paul Hoover Bowman, Gordon P. Liddle, Charles V. Matthews, and James V. Pierce, *Growing Up in River City* (New York: John Wiley & Sons, Inc., 1962), p. 46.

[13] Educational Policies Commission, *op. cit.*, pp. 18–19.

[14] Cited in *Education U.S.A.*, April 18, 1963, p. 129.

Similar projects have been developed, some with the support of the Ford Foundation, in other large cities in recent years.

Perhaps the strength of these projects for the culturally and economically disadvantaged is their frank recognition that it is not necessarily a fundamentally different program but more individualized instruction and experiences that these learners need. Undoubtedly, in order to restore some measure of equality of educational opportunity for the disadvantaged additional support is essential.

Such support was earmarked in federal aid by the Elementary and Secondary Education Act of 1965 which provided an initial fund of more that $1 billion to be distributed on the basis of the number of low-income families in the school districts of each state. This plus earlier "anti-poverty" legislation definitely aimed toward the removal of disadvantage.

Dropouts

Although the rate of school dropouts has decreased sharply during the twentieth century, the percentage of pupils not staying until graduation from high school was still high enough to be considered a grave social and educational problem in the early 1960's. For every 1000 pupils entering the fifth grade in 1924–1925, 302 graduated from high school seven years later, in 1932. In 1954–1955, of every 1000 entering the fifth grade, 636 graduated seven years later, in 1962, an increase in holding power of more than 100 percent.[15] Holding power varies greatly among the states, however, the number of high school graduates in 1963 being 87.5 percent of the ninth-grade enrollment of 1959–1960 in the high state (California), 56.8 percent in the lowest state (Georgia), and 72.7 for the United States as a whole.[16]

Despite the increased holding power of the schools, the fact is that in the mid-1960's, almost one in three of the nation's youth might be expected to drop out of school before completing high school. At the same time, technological changes were all but eliminating jobs for the unskilled, for it was estimated that only about 5 percent of the total labor force would be engaged in unskilled jobs during the decades ahead. Also widely cited was the fact that the rate of unemployment among boys who had dropped out of school was two to three times higher than among high school graduates. Indeed, the school dropout tends to become the problem child of our social and economic system, since he or she is most likely to be unemployed and economically dependent, to tend toward delinquency, and in general to be less well adjusted, less happy, and less productive than his classmates who complete their formal secondary education. Recognizing the extreme gravity of this problem, the National Education Association in September, 1961, under a Ford Foundation grant, established a three-year Project on School Dropouts which sought to provide consultative and clearinghouse services to schools and other agencies concerned with the problem.

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[15] "Holding Power of U.S. Schools Rises," *School Life*, 45:35 (November–December, 1962).

[16] National Education Association, Research Division, *Rankings of the States, 1964* (Washington, D.C.: National Education Association, 1964), p. 25.

The dropout was made a matter of urgent national concern in the summer of 1963, when President Kennedy wrote college and school administrators urging them to persuade the potential dropouts of the previous year to return to school. The President also made some of his emergency fund available to various cities to accelerate the campaign against dropouts. United States Commissioner of Education Francis Keppel later reported a splendid response to these efforts but cautioned that the goal was to improve the education of the student, not just keep him in school, and also that vocational education should not be regarded as the solution to the dropout problem.[17]

Approaches to better provisions for potential dropouts are closely related—in fact, they are frequently identical since the groups overlap greatly—to those for the culturally disadvantaged. Early identification, more guidance, and more individualization of instruction are common preventive measures as are work-study programs, remedial reading and other services, and special summer remedial and enrichment programs. Martin Mayer's commentary on a 1962 symposium sponsored by the NEA Project on School Dropouts suggested, rather caustically but insightfully, the need for more thoroughgoing curriculum improvement:

> Most schoolwork is duller, less fruitful, and more stereotyped than it need be. Boredom as much as failure produces the tendency to drop out, and boredom can lie behind failure, too. In far too many cases, children are asked to postpone gratification on behalf of a reward that will in fact never come because what they are being taught is trivial or even worthless. Curriculum and materials are too often stupid as well as dull, and aimed to produce attitudes and allegedly practical pseudoskills rather than understanding and capability. The American educator, like the American businessman, has developed the dreadful habit of selling the sizzle rather than the steak.[18]

Although curriculum planning needs to provide the remedial type of program, it must be recognized that the seeds of school discontent and dropout are sown in the early home and school life of the individual. The following factors have been commonly associated with school dropout:

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[17] Francis Keppel, "Keeping Students in School—The Ends and the Means," *School Life*, 64:13 (December, 1963).

[18] Martin Mayer, "A Perspective," in Daniel Schrieber (ed.), *The School Dropout* (Washington, D.C.: National Education Association, 1964), p. 210.

Lack of student interest in the school
School failure
Inability to do schoolwork (poor study habits; low reading level)
Lack of participation in extracurricular activities
Financial cost of attending school
Low economic status of parents
Low educational level of parents
Lack of parental interest in child's schooling
Attraction of outside employment
(For girls) marriage and/or maternity[19]

Thus the causes of school dropout and consequently the needs for educational programs to prevent school-leaving are intertwined with the other individual differences that the federally-aided programs initiated in 1964 and 1965 were designed to reduce.

The basic approaches to holding boys and girls in school until completion must somehow make schooling more attractive to children and youth, give them a better opportunity for success, and so far as possible help their parents and communities recognize the value of schooling. Thus we would conclude that the overriding problem in curriculum planning is much more than how to develop special projects to hold those who would leave school. The real problem would seem to be to make schooling from the very beginning so attuned to the individual that each will find in the school opportunities recognized as more important than any transitory attractions outside.

Gifted Pupils

The national search for talent in the 1950's highlighted "gifted" pupils. Research studies and publications in considerable number were devoted to such problems as finding, identifying, and providing for those pupils who have exceptional talents, with emphasis on intellectual ability. The distinction between "academically talented" and "gifted" pupils has been a hazy one, although clarification was attempted in the 1958 Conference on the Academically Talented, by its chairman, James B. Conant, and also in Conant's report, *The American High School Today*. In his introduction to the conference report, Conant defined the "gifted" as not more than 2 percent of the high school population, that is, of "the really unusual pupil, who often fails to do well in school just because he or she is too able and is not challenged by the work."[20] In his 1959 report on *The American High School Today*, Conant suggested that "the highly gifted pupils" constituted "on a national basis about 3 percent of the student population."[21] Other estimates have varied from less than 1 percent to as much as 20 percent, the differences being due in large part to the basis of identification. Indeed, some would argue that almost all children and youth have some type of giftedness and would reject arbitrary criteria or cutoff points for identifying gifted pupils.

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[19] See Schreiber, *op. cit.*, for analysis of social factors and educational implications related to the dropout problem.

[20] Conant, *Identification . . . of the Academically Talented Student . . .*, p. 16.

In this careful treatment of studies and ideas in the field of education of the gifted, Lucito proposed the following definition:

> The gifted are those students whose potential intellectual powers are of such a high ideational level in both productive and evaluative thinking that it can be reasonably assumed they could be the future problem solvers, innovators, and evaluators of the culture if adequate educational experiences are provided.[22]

Lucito describes this as a "productive-evaluative-thinking definition." We ourselves noted in Chapter 2 a relationship between creativeness and intellectual power, but reviewed the inadequacy of intelligence tests as predictors of creativity. Thus we doubt if any accurate estimate can be made of the extent of giftedness or creativeness in the population. There simply are not as yet measures refined enough to give reliable data about the abilities concerned. Certainly, however, both true giftedness and curriculum provisions for it seem relatively rare.

For the most part, the provisions for gifted pupils are identical with those described in an earlier section on the academically talented. As school faculties have attempted to be more discriminating in the definition of these two groups, more emphasis is placed on provisions for independent study, readings and courses of the honors type, and leadership opportunities for the gifted. Most approaches to curriculum adjustment for gifted pupils have started with some type of special grouping. "What administrative techniques are used in your school to adjust the curriculum for superior and talented students?" was a question that yielded the following information from the responding schools participating in the Project on Guidance and Motivation of Superior and Talented Secondary School Students of the North Central Association of Colleges and Secondary Schools:

> Grouping of students according to ability was used in 94% of the schools.
> Organized enrichment in heterogeneously grouped classes was used in 65% of the schools.
> Selective acceleration of students was used in 42% of the schools.
> The introduction of special courses for STS was used in 38% of the schools.[23]

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[21] Conant, *The American High School Today*, p. 62.

[22] Leonard J. Lucito, "Gifted Children," in Dunn, *op. cit.*, p. 184.

[23] J. Ned Bryan, *Building a Program for Superior and Talented High School Students* (Chicago: North Central Association, 1963), p. 45.

The frequent description of "enrichment" as a major provision for gifted students is not very definitive and helpful. However, many types of leadership opportunities, special activities of an intellectual nature, and special field and research opportunities, particularly at the secondary school level, might be defined as "enrichment" and truly be among the very best provisions possible for the gifted. Certainly the general principle of independent study and learning is especially applicable to the highly motivated and competent learner. In general, we believe that with the gifted as with other individuals the best provision is probably the one a capable teacher works out with an individual pupil in the light of the latter's potential and the resources of school and community.

Mentally Handicapped

Our society has become more kindly toward and interested in the mentally handicapped or the intellectually limited child. The "educable mentally retarded" are generally defined as those with an IQ of from about 50 to 75, the "trainable mentally retarded" as from about 30 to about 50, and the "custodial" as those below 30. The incidence of the educable mentally retarded in the school age population has been estimated to be about 2 percent, and of the trainable mentally retarded about 0.3 percent.[24]

Recent curriculum planning for the educable mentally retarded pupils has not found a single panacea for this group of individuals. Although the trend has been toward special classes, research and opinion have not been conclusive on this point. Kirk suggests that the program of special classes for mentally retarded children should include special diagnosis including medical, social, psychological, and educational evaluations, with periodic reassessments; special materials adapted to the retarded child; special remedial procedures in reading and other skills; teaching methods which "utilize the best practices in learning"; systematic instruction "programmed in sequence"; individualized instruction; and success experiences.[25] (Kirk noted that "although this principle is applicable to all children it is particularly necessary with children who are retarded.") In view of the overlappings between provisions made for many so defined categories of learners, it may be noted that Kirk's comment about the general applicability of the success principle would also be true for all his suggestions as to the program for mentally retarded children.

As to the trainable mentally retarded, the issue here is primarily whether these individuals should be provided their training in the public school or in some other type of institution. Practice varies. Whether the development of special programs and facilities for these children and youth is to be done by the public schools or by other community agencies is, we believe, a matter of decision within each community. Increased interest in and federal subsidy for the education of the mentally retarded should make possible marked improvement in provisions for their optimum development.

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[24] See Lloyd M. Dunn, "Educable Mentally Retarded Children," in *Exceptional Children in the Schools*, pp. 54–58.

[25] Samuel A. Kirk, *Educating Exceptional Children* (Boston: Houghton Mifflin Company, 1962), pp. 119–122.

Physically Handicapped (including Sight and Hearing)

The extent of physical handicaps, including sight and hearing, in the school age population was estimated in 1963, on the basis of United States Office of Education data, as follows:[26]

Speech impaired	3.5%
Hearing impaired	0.6
Hard of hearing	0.5
Deaf	0.1
Visually impaired	0.09
Partially seeing	0.06
Blind	0.03
Nonsensory physically impaired	2.0
Crippled	1.0
Chronic health problems	1.0

Some helpful data as to the extent of provision for these handicaps is available in a January, 1961, NEA Research Memo. This report of a survey of urban school districts, with 875 districts reporting, showed that speech therapists were being provided to at least some extent in 64.1 percent of urban school districts, 37.8 percent of the districts providing this service fully. As to the hard-of-hearing pupils, 19.0 percent of the districts made some provision. Four fifths of the districts made no provision for the pupils with limited vision. Almost one fourth of the districts provided fully separate classes for physically handicapped pupils, and an additional 13.4 percent of the districts were adding or exanding their services. In general, these services were least commonly provided in districts with the smallest population and increased in provision as the districts became larger.[27]

The curriculum provisions for physically handicapped children are so varied and so dependent on the nature of the handicap that we shall not attempt to summarize the subject here. Rather, we would recommend that curriculum planners consult some of the excellent publications in this field. Our general belief is that so far as the physical handicap permits, the individual should be provided a curriculum approximating that of his peers without handicaps and as far as possible in the same school setting. At the same time, we recognize that some of these exceptionalities are multiple: for example, both mental and physical handicaps are sometimes found in the same individual, hence each case may have to be dealt with individually.

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[26] Dunn, *op. cit.*, p. 17.

[27] See National Education Association, Research Division, "Special Provisions for Handicapped Children," NEA Research Memo 1961–5 (Washington, D.C.: The Association, January, 1961).

Socially and Emotionally Maladjusted

Although the incidence of emotionally and socially maladjusted individuals among the school-age population has been estimated to be about 2 percent, this is almost uniquely in the area of exceptionality in which the dividing line between normal and maladjusted behavior is very, very thin. Many teachers, for example, regard as exceptionally maladjusted or disturbed the same behavior others might regard as relatively normal. Furthermore, such behavior is frequently of a very temporary nature, usually disappearing as the individuals concerned mature and/or encounter a new and more favorable environment. The problems of individuals who do have real maladjustment or disturbance are exceedingly real, of course, and most certainly require the best counseling and educational services available.

Undoubtedly, the emotionally disturbed children and youth in our schools need very special attention. First of all, their condition needs to be diagnosed by competent specialists. Then if they are to remain in school, they require highly individualized understanding and provisions. If they are not to remain in school, school personnel need to provide such information as possible to the institutions in which these children and youth are placed and also to have programs to which they may return when outside treatment is successfully completed.

An interesting innovation in the education of emotionally disturbed children was initiated in 1961 in the states of Tennessee and North Carolina in cooperation with George Peabody College for Teachers. With funds provided by the National Institute of Mental Health, Project Re-Ed operated in each state a residential school for about forty emotionally disturbed children between the ages of six and twelve. Peabody trains teacher-counselors, each of whom works with a group of eight children at the Re-Ed school. The schools are residential but are not operated in the usual institutional pattern.[28]

The Terminal Education Group

By the mid-1960's, about half of the youth who graduated from high school were going on to college. Assuming continued good economic conditions, indications point to an increasing proportion of those for whom high school is in part preparation for college. There remains, however, the remainder, still about half, of high school graduates for whom the secondary school is a terminal institution, at least terminal until such time as the young adult or even the older adult continues his education through part-time or continuation or adult education programs. Most of these youth seek and find some type of employment after high school graduation, although curriculum planners must also recognize their obligation to the young housewife and mother.

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[28] See Nicholas Hobbs, *Re-education of Disturbed Children: A Demonstration Project* (Nashville: George Peabody College for Teachers, 1961), for further information about this program.

The problem of curriculum planning for the terminal high school student is somewhat complicated by the fact that many who may be expected in grade 9, for example, to be terminal students may actually find ways and means of going on to college upon graduation. It is further complicated by the fact, at least equally likely, that many of these youth may terminate their education before high school graduation, even within the year after completing grade 9. Thus it seems certain that the total high school program must be so arranged that youth may find profit in it regardless of their destinations. We are inclined to believe that programs for dropouts should be so planned as to still be of advantage to those who are deterred from dropping out before graduation. Furthermore, there is the still significant percentage of youth who see high school as a means to specific preparation for their work careers or even their family responsibilities.

The great need for skilled manpower in the United States, plus the prevalence of unemployment among those lacking specific vocational education, led to a study of vocational education by President Kennedy's Panel of Consultants on Vocational Education, which reported in late 1962. Among the panel's findings as to vocational programs for high school youth were the following pertinent points:

> Programs for high school youth are limited in scope and availability. About half the high schools offering trade and industrial education have four or fewer programs, and these are closely related to single occupations. The problem of availability is in part a function of the size of the school; it is even more a function of the commitment of the school to occupational preparation as an element of the instructional program.
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> High schools have failed to provide basic training programs for groups of occupations. Limiting instruction to single occupations reduces the scope of a school's program. Federal aid has not generally been available to support the development of instruction for groups or clusters of occupations.[29]

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[29] *Education for a Changing World of Work.* Report of the Panel of Consultants on Vocational Education, U.S. Department of Health, Education, and Welfare, Office of Education (Washington, D.C.: Government Printing Office, 1963), pp. 158–159.

The panel also clearly emphasized the point that terminal education should be more than vocational training, however:

> The pursuit of a vocational curriculum should permit a student to continue the achievement of basic educational skills, training for leadership, and growth as a citizen. The vocational curriculum should help the student who is not going to college to succeed in his next venture, just as the academic curriculum helps the student who goes to college.[30]

Underachievers

Perhaps the most serious of all problems requiring curriculum differentiation is that of the underachieving learner. In an era in which individual achievement and fulfillment have never been valued more highly, it is tragic to discover pupil after pupil whose school achievement is far below his potential. A 1962 report from the United States Office of Education reviewed several studies showing a high incidence of underachievement and concluded that "a large proportion of capable students are not doing work commensurate with their capacities."[31]

We suspect, however, that the problem of underachievement is somewhat different and is probably graver than suggested by the sheer comparison of intelligence and achievement test results. We noted in Chapter 2, in fact, the fallacy of designating "over-" and "under-" achievement on the basis of IQ. Certainly, one cannot regard either measure so valid as to label a pupil merely by comparison of tests of intelligence and achievement, both imperfect.[32] Furthermore, underachievement in terms of scores on achievement tests may be indicative of student indifference both to the subject matter and to the test, but it may also indicate discontent with the program of schooling the individual has been having. We would fear that this discontent might spread into the individual's general behavior to the point that significant talents, even more significant than those measured in part by achievement tests, might go undeveloped. The most regrettable aspect of underachievement is suggested in the following statement from a Detroit counselor in his review of the inconsistency of current research and analysis dealing with underachievement:

> If a student is underachieving, he is not adequately utilizing his inner resources. But to know why this is happening, we must examine, not underachievement, but the individual. Like other behavior, underachievement is meaningful only in terms of the actor himself. What purpose

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[30] *Ibid.*, pp. 225–226.

[31] Leonard M. Miller (ed.), *Guidance for the Under-achiever with Superior Ability* (U.S. Office of Education Bulletin 1961, No. 25; Washington, D.C.: Government Printing Office, 1961), p. 3.

[32] See Robert L. Thorndike, *The Concepts of Over- and Under-achievement* (New York: Bureau of Publications, Teachers College, Columbia University, 1963), Chap. 1, for his critique of research on these concepts.

> does scholastic success or failure serve for him? How is it used in his self-structure?
>
> We seek a panacea for our non-performing students, a magic that will stir the laggard and salve the distressed. But there is neither universal cause nor cure. In the interactions between a unique personality and his perceptual world lie the reasons for scholastic failure. Much current research has lost sight of this commonplace; perhaps that is why the research has proved to be of so little value.[33]

Perhaps the most astute observation we can make with certainty about the underachiever is that he is apparently unmotivated, at least for whatever he is failing to achieve. In a paper on "Factors Related to Scholastic Underachievement," prepared for a workshop on "The Reluctant Learner" at George Peabody College for Teachers during the summer, 1962, Paul H. Bowman, then chief consultant, Quincy Youth Development Project, cited five elements of motivation which he considered as present in those who were, and lacking in those who were not, motivated:

1. A basic unconscious need for achievement that seems to drive (some individuals) to achieve maximum success in almost everything they undertake
2. The need to know—"a deep desire to carry out thinking and investigative activities for the sheer joy it brings"
3. The recognized social values of the family or neighborhood
4. The way we perceive other people
5. Self-perception: "If underachievers perceive parents and teachers as disapproving them, it would follow that this would affect their own perceptions of themselves."[34]

Many programs have been attempted for remediation of underachievement. The conclusions regarding experimental provisions for underachievers of the Talented Youth Project of Teachers College, Columbia University, seem particularly appropriate to our theories of individual differences and learning. Two factors were found to be critical in the remediation of underachievement in this project: (1) identification with the teacher who is especially interested in the individual and the teacher's acceptance of him as an able person needing special help; and (2) remedial measures for mastering learning skills which the underachiever has generally failed to acquire.[35]

Curriculum planning for the underachiever must take into account the importance of parental and community attitudes toward intellectual achievement. Coleman's study of *The Adolescent Society: The Social Life of the Teenager and Its Impact on Education* suggested that high school students are much more interested in athletic prowess (boys) and popularity (girls) than in intellectual success.[36] Although parents were found to state greater interest in the intellectual successes of their children, one wonders whether day-by-day activities of home, school, and community are not more supporting of the adolescent's values than of those stated by his parents.[37]

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[33] John Peterson, "The Research and the Underachiever: Never the Twain Shall Meet," *Phi Delta Kappan* 44:381 (May, 1963).

[34] Paul H. Bowman, "Factors Related to Scholastic Underachievement," pp. 8–16. Address at George Peabody College for Teachers, Summer, 1962. Mimeographed.

[35] See A. Harry Passow and Miriam Goldberg, "Study of Underachieving Gifted," *Educational Leadership,* 16:121–125 (November, 1958).

A CONTINUUM OF DIFFERENTIATION

As one reviews the efforts made in American elementary and secondary schools to differentiate the currriculum for individual learners, various patterns of these efforts appear. Indeed, it seems possible to arrange the various approaches on a continuum of differentiation with reference to the apparent extent of differentiation desired. At one extreme is the theory that all learners should have the same program; at the other, that each learner should have a program tailored to his individuality. Obviously the extremes reflect strongly differing philosophies: the one that the best curriculum is known and is best for all pupils at all times and places; the other that what is best has to be determined so far as possible for each individual.

Before turning to brief consideration of each of the approaches to differentiation, two possibilities of misinterpretation of the continuum should be noted. First, the continuum is not to be confused with a time line, despite the fact that the uniform, academic curriculum came first in the United States. As we know, such a curriculum still exists, and some of its current proponents would make it the curriculum pattern of the future. Second, we do not intend to imply that the continuum goes from bad to good, or from good to bad. There are both good and bad elements in each approach. Curriculum planners should study each possibility of differentiation for its applicability to the school and to the individuals concerned. In general, we believe that full individualization is highly desirable, but recognize grave difficulties involved in its implementation. Thus it is suggested that other approaches be used primarily to the extent that they can effectively substitute for individualized instruction.

Emphasis on a Uniform, Academic Program

A high degree of uniformity has existed both between schools and in the programs of individual schools throughout the more than 300 years of American education. At the elementary level, the prevailing philosophy has been that of inducting the young into the culture. Although the traditional conception of the three R's as the basic cultural elements for emphasis in the elementary school has been greatly extended to include many other elements, the program once defined in a particular school has generally been taught uniformly to all its pupils. Curriculum differentiation in elementary schools has been for the most part a matter of varying the speed of pupil progress and the depth of learning within the established program, rather than modification of the program for the learner. However, exceptions are increasingly frequent, especially for learners at the extremes of the range of ability.

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[36] See James S. Coleman, *The Adolescent Society: The Social Life of the Teenager and Its Impact on Education* (New York: The Free Press of Glencoe, 1961).

[37] For an elaboration of this point see Donald Erickson, "The Organization Student—An Essay Review," *Administrators' Notebook*, 10:4 (November, 1961).

As to the secondary school, the program of the Latin grammar schools of the colonial period was indeed a uniform one. Curriculum differentiation was introduced in the academies and expanded in the public high schools of the nineteenth century, but until even today the dominant program has been the uniform one in the so-called academic subjects. The idea of a uniform, academic program has changed over the three hundred years with respect to what is academic, but not toward uniformity. The common program in the Latin grammar school was Latin and Greek; in the Committee of Ten report (1893) Latin and Greek were optional, and English, some foreign language, mathematics, science, and history constituted the program. Many influential recommendations and movements of the mid-twentieth century would restrict very closely the program of academically talented and college preparatory students to one not unlike that recommended by the Committee of Ten and generally implemented in high schools at the turn of the century.

We recognize the necessity of common learnings for pupils in both elementary and secondary schools, especially in the former. We reject, however, the notion underlying the other approaches to which we now turn, approaches that simply adjust the rate of progress of pupils through the common learnings program. Variable programs seem essential in view of the known variability among learners.

Acceleration and Retardation

Probably the most frequently practiced administrative device for curriculum differentiation has been adjustment of the rate of progress of pupils through school. The principle here is quite simple: let the slow learners spend more years in the elementary school, for example, and the rapid learners fewer years. Despite the claims of critics that retardation has disappeared in favor of policies of "social promotion," the facts are that many learners throughout the country do spend more than six years in six grades, for example. Age-grade distribution tables clearly indicate by the spread of chronological ages in a single grade in junior high schools, for example, that automatic promotion has not occurred for all.

A considerable body of research on acceleration and retardation can be consulted by curriculum planners considering rate adjustment as a possible provision for individual differences. Cook and Clymer reviewed existing research in their chapter for the 1962 yearbook of the National Society for the Study of Education, and listed the following pertinent conclusions among others on the basis of their review:

> (5) Acceleration and retardation policies which place fast-learners, who are relatively young, in the same group as slow-learners, who are average, create serious social and behavioral problems. This is the serious limitation of such devices as the "Ungraded Primary School." . . .
>
> (1) When pupils in the lower 5 to 10 per cent of classes are failed because of low achievement, they do not become better adjusted educationally or socially in the retarded position. The available evidence indicates that, on the average, they achieve as much or more by being given more regular promotions. . . .
>
> (12) Policies of promotion and acceleration cannot solve the problems of individualizing instruction. Poor policies only aggravate it. The problem must be solved in the areas of pupil-teacher ratio—the philosophy and preparation of teachers—the furnishing of adequate books and instructional materials, the architecture of the school building, the organization of the school for instruction, and competent administration.
>
> (13) A well-prepared teacher is the crucial factor in individualizing instruction.[38]

In recent years several newer forms of acceleration have appeared. For one, there has been the substantial acceleration of curriculum content by pushing it downward in the graded system. As we noted in Chapter 9, mere moving of subject down or up in the graded system does not necessarily differentiate the curriculum for individual learners nor even provide a better program for all. Another type of acceleration (and retardation) is provided in the ungraded school to which we gave particular attention in Chapter 10. Although the ungraded school does not have to be administered in such a way as to retain some children longer than others, the possibility of extending the period of attendance for some and shortening it for others has been one of its justifications urged by some proponents. Although some variations in length of attendance do seem essential in adequate curriculum differentiation, we hope that the elimination of grades will aim at better programs for individual learners once the concept of uniform grade standards is abandoned.

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[38] Walter W. Cook and Theodore Clymer, "Acceleration and Retardation," in Fred T. Tyler (chm.), *Individualizing Instruction*, 61st Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1962), pp. 207–208.

Still another recent and current application of acceleration is found in the Advanced Placement program of high schools and colleges. This program, established in 1955 with the cooperation of the Fund for the Advancement of Education, the College Entrance Examination Board, and the Educational Testing Service, has expanded very rapidly; in 1963–1964 the Advanced Placement examinations were taken by 28,874 students (an increase of 33 percent over the previous year).[39] Although affecting only a minority of schools and students, the Advanced Placement program has given the high school students in it a chance to take college-level courses in some fields. The examinations (prepared under the direction of the College Entrance Examination Board) required for advanced placement in college place some limitations on the courses, and courses have been available in only a limited number of academic subjects. Nevertheless, this type of possible acceleration does not push the student into college earlier, and it facilitates articulation of the high school and college program. The Advanced Placement courses may, of course, receive attention and support in high school out of proportion to the number of students in them.

A type of acceleration which has become less and less popular in the high schools is early admission to college. The two programs are compared in the following statement from a report of the Fund for the Advancement of Education, which supported both programs: "In effect, Early Admission to College is a way in which weaker high schools can help their most capable students avoid the doldrums of being tied to slower classmates; Advanced Placement, in contrast, is useful to high schools that have the facilities and the faculty to offer the advanced courses.[40]

Groupings for Instruction

Following the advent of intelligence testing, ability grouping emerged in the 1920's as a possible solution to the problem of differentiating the uniform school program. Although research evidence has never been very conclusive as to its positive effect on achievement, a resurgence of ability grouping amounting to almost a bandwagon movement occurred in the late 1950's and early 1960's. The 1961 survey by the NEA Project on Instruction determined that 46 percent of the elementary school principals reporting stated a shift toward this method of grouping had occurred between 1956 and 1961. An increase in grouping according to ability and/or achievement was reported for the same period by nearly two thirds of the secondary school principals. Furthermore, 54 percent of the elementary and 63 percent of the secondary school principals expected an increase in homogeneous grouping by ability and achievement by 1966, and only 7 percent of the elementary and 5 percent of the secondary school principals said they planned no such grouping.[41]

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[39] E. M. Gerritz, "Advanced Placement," *NEA Journal*, 54:22 (January, 1965).

[40] The Fund for the Advancement of Education, *Decade of Experiment* (New York: The Fund, 1961), p. 89.

The various grouping plans and movements[42] reflect the concern of the educational profession and the public for improving the educational experiences of each individual. Whether improvement actually occurs is clouded. A large number of studies have been made of the effectiveness of grouping, but Passow's 1962 review of the research concluded: "In the search for research findings, the quantity is great (dating back forty years or more), the quality is irregular, and the results generally inconclusive for reasons which soon become apparent."[43] As he further pointed out, little evidence was available on any of the newer grouping approaches. It is encouraging to note, however, that most of the more recent grouping efforts used bases of classification other than the I.Q. alone. Achievement grouping by subjects became a common pattern in secondary schools, and various types of ungraded arrangements have been utilized in both elementary and secondary schools (see Chapter 10). Perhaps more thorough evaluation of individual school practices of these types will yield more satisfactory data as to their efficacy in particular situations.

Special Schools and Classes

In this book, and especially in this chapter, we have dealt with the use of special schools and classes for the purpose of differentiating the program for special groups of learners. Although the comprehensive high school seems here to stay, the increasing need for vocational education in the upper levels may well produce more and more schools with adequate facilities for modern vocational education. Undoubtedly also, increased national concern for such extreme exceptionalities as the trainable mentally retarded, as well as individuals with physical handicaps that render them almost immobile, will call for increasing numbers of institutions equipped to deal with these individuals effectively.

As to special classes, curriculum planners may well become more critical as to what "special" traits are best provided for in "special" classes. The idea of special classes organized purely on the basis of IQ is rejected, of course, if one accepts the conclusions of research on ability grouping.

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[41] Project on the Instructional Program of the Public Schools, *The Principals Look at the Schools* (Washington, D.C.: National Education Association, 1962), pp. 15 and 39.

[42] See Harold G. Shane, "The School and Individual Differences," in Tyler, *op. cit.*, p. 49, for a list of 35 types of grouping.

[43] A. Harry Passow, "The Maze of the Research on Ability Grouping," *Educational Forum*, 26:281 (March, 1962).

On the other hand, the idea of special opportunities for many types of individuals—opportunities which may necessitate at times special groupings rather than across-the-board classification—is completely consistent with the philosophy of true curriculum differentiation for individual learners.

Much more research is needed regarding the effect of special schools and classes and other opportunities on the utilization of student talents. Educators may look forward with great interest to the publications of Project TALENT and of the researches which this significant undertaking makes possible. As we noted in Chapter 2, this massive collection of data through the follow-up periods should eventually be used quite effectively to evaluate the effectiveness of various provisions currently made by the schools.

Multiple Tracks and Rails

The basic idea underlying the provision of multiple programs seems much closer to the purposes of curriculum differentiation for individual learners than approaches reviewed thus far. Beginning with the eighteenth-century academy, secondary schools have tended to provide multiple programs of various types, chiefly college-preparatory, vocational, and so-called general. Multiple-track programs generally eventuate in multiple diplomas at graduation time, although some schools use the multiple diplomas to distinguish the quality of work done by graduating students rather than the type of programs they elected.

Some elementary schools have provided for differentiation through plans of multiple "rails," phases, or levels. The plans that group pupils in all subjects on the same criterion of ability represent a type of ability grouping; however, the program for each group may be more differentiated than in ordinary ability grouping by providing more depth for the abler pupils.

Although we recognize the administrative convenience of the multiple-program approach to curriculum differentiation, two limitations should be noted. In the first place, these programs, especially as developed at the elementary school level, tend to be another type of ability grouping and when they are they exhibit all the limitations of this approach (see our extended discussion of grouping in Chapter 10). If the basis of differentiation is the verbal ability of students, with the students having highest verbal ability taking more advanced academic work and those with least verbal ability going at a slower pace and perhaps assigned more handwork activities, there is little opportunity for students to explore their own resources or to be challenged to overcome their initial disabilities.

In the second place, some multiple programs are administered on a highly inflexible basis. When this occurs, learners in the college-preparatory program, for example, are effectively denied the opportunity to discover or develop their potential in fields such as the arts, homemaking, business education, as well as others. At the secondary level, it therefore seems more desirable to have, as many schools do, such a variety of offerings that the student may select for himself, with the aid of wise counseling, those curriculum opportunities which will fulfill his post–high school requirements and at the same time permit both breadth and depth in his curriculum. In effect, the pattern of required and elective subjects and activities should be such that the student has the opportunity to develop his own track.

Phasing and Nongrading

A type of achievement grouping which offers real possibilities for curriculum differentiation may be described as phasing, one variant of a nongraded approach to organization of the curriculum (see Chapter 10 for a more complete discussion of nongrading). In their predictions as to "Schools of the Future," Trump and Baynham suggested:

> The curriculum will be divided into stages or steps not identified as years or grades, and without any fixed number. The rate of progress through school will be determined by the student's previous achievements and by his capacity to take the next step. His readiness to move on, again, will be gauged by professional decision and not by a test, a grade, or a unit of credit.[44]

The plan of "phases" at the Melbourne (Florida) High School is described in part in the following words of its principal:

> The plan for continuous learning at Melbourne accommodates youngsters by placing them in temporary learning situations from which they can move at any time. These *ad hoc* learning arrangements are called "phases." A phase is a stage of development with a varying time element. One student may remain in a lower phase indefinitely; another may progress rapidly into higher phases.[45]

The Melbourne plan includes five regular phases in subjects adapted to phasing, plus an "X" phase in other subjects, such as typing and physical education, and a "Quest" phase for students with unusual abilities and creative powers:

Phase 1: For students who need special assistance in small classes
Phase 2: For students who need more emphasis on the basic skills

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[44] J. Lloyd Trump and Dorsey Baynham, *Focus on Change: Guide to Better Schools* (Chicago: Rand McNally & Company, 1961), pp. 55, 57.

[45] B. Frank Brown, *The Nongraded High School* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963), p. 49.

Phase 3: For students with average ability in subject matter
Phase 4: For capable students desiring education in depth
Phase 5: For students with exceptional ability who are willing to assume responsibility for their own learning and go far beyond the normal high school level[46]

Enrichment Opportunities

A great many curriculum opportunities may be categorized under the general heading "Enrichment." On the one hand, there is still the occasional practice in an elementary school of devoting a portion of, for example, Friday afternoon, to record playing, storytelling, and other activities which children enjoy and appreciate but which are considered as being "outside" the regular curriculum. At the other extreme of use of the term, as we mentioned earlier in reference to culturally disadvantaged learners, is the practice of attempting to build almost the entire program around "enriching" experiences designed to alleviate the cultural deprivation of these children and youth.

Perhaps the most traditional and predominant applications of the enrichment concept are the elective subjects and activities of the secondary school. The occasional optional subject in the nineteenth-century secondary school and today's long list of many elective subjects in most fields were and are regarded by some as nothing more than enrichment of the required subjects. Other educators, probably most of us, see the electives as opportunities through which each individual student may find an abiding interest, a high success, and perhaps a career determinant.

Indeed, such special provisions for individuals as honors seminars, special readings, creative activities, independent study plans of the magnitude of Melbourne's "Quest phase," and individually tailored work-study programs represent genuine enrichment for the individual's fulfillment. Similarly, the burgeoning "extracurricular" movement, primarily of the twentieth century, can be regarded as "extra" dessert over and above the main meal of the academic program, or it may be regarded—as it frequently is by learners themselves—as embodying highly important opportunities for self-discovery and development.

Extended Teacher-Pupil Relationships

Curriculum differentiation through extending the opportunity for a particular teacher to work with individual pupils is most recently a secondary school development. However, the movement away from departmentalization in elementary schools a few decades ago was partially in recognition of the same principle: that individual pupils might be taught better by a teacher who has worked with them long enough to know them well. More recently, of course, this philosophy seems to have been modified in the numerous elementary schools which have returned from the self-contained classroom organization to some type of departmentalization.

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[46] *Ibid.*, p. 50.

At the secondary level, the extension of time of a particular teacher with a group of pupils has been accomplished most frequently by a block-of-time schedule or core curriculum organization. This pattern of organization, as we have noted, has become quite typical in junior high schools, where there is an obvious need to bridge the gap from the self-contained classroom of the elementary school to the highly departmentalized program of the senior high school. This approach offers much to be commended in the opportunity it provides for a teacher to have two or even three hours per day with a particular class group. During this extended time, the teacher has a chance to understand each pupil and to help him to achieve at his highest level.

Flexible scheduling at the secondary level, providing as it does for varied periods of time for the individual student to spend with particular teachers, also enables the learner who needs extended help in reading, for example, to work with a specialist in reading for whatever intensive period is necessary in order to find remediation for his difficulties. Such scheduling also makes it possible for the gifted individual to have extended contact with the art teacher and studio, for example, if this is the situation in which he can best develop his potential.

Guidance Provisions

The entire subject of pupil guidance has become so specialized as to be beyond the scope of this book. However, we should note that an acceptable guidance point of view gives central focus to the individual learner, his problems and potentialities. Although adequate guidance services can certainly not be expected to substitute for the teacher's own guidance of pupils he knows well, the guidance specialist can and usually does offer fine support and services to teachers as the latter work with individual pupils. As we see them, the most effective guidance provisions in elementary and secondary schools embrace both the discriminating role of the teacher in working with the learning processes of his pupils, and the aid and support a counselor can offer in hearing out both teachers and pupils about their aspirations and problems. Further, such provisions include an optimum arrangement of diagnostic and predictive testing of learners, the interpretation of test results to teachers, pupils, and parents, and individual counseling of learners upon referral by teachers or the individuals themselves, and also referral by the counselor to outside experts where the need is indicated.

Individualization of Instruction

As we stated in introducing this chapter, the optimum curriculum differentiation for individual learners is individualized instruction. This approach may appear an idealistic if not an impossible one. Effective individualization has usually been considered possible only in small schools, especially well-supported or high-tuition private ones. Although many of the best efforts toward differentiation of the curriculum have undoubtedly originated and are possibly more typical in such schools, it should be noted that large schools, too, employ many devices to help each learner find the best possible arrangement of experiences for his own development. We now turn to a brief exploration of the possibilities of individualization of instruction in usual teaching situations.

DIFFERENTIATION THROUGH THE INDIVIDUALIZATION OF INSTRUCTION

The following stimulating statement of a philosophy of learning and teaching could well be basic to curriculum planning for individualized instruction:

> Learning can best flourish when teachers, supported by adequate materials, create a climate in which children are genuinely desirous of learning. It will flourish when children become, with the teacher's stimulation, self-motivated, knowing that learning is necessary and important. Conclusions, values, solutions to problems are not taught. . . . They are learned, created, possessed internally by the child, having been excited by the teacher, and having been led by the teacher to the place where the answers might be found.[47]

The 1964 Yearbook of the Association for Supervision and Curriculum Development, *Individualizing Instruction,* treated the topic from the standpoint of discovery and release of potential in learners. In the concluding chapter, the yearbook committee listed the following as "several promising ways of releasing potential through teaching":

> Observing and listening to learners with increased care and concern
> Becoming more sensitive to clues which indicate how teachers can help
> Achieving openness in pupil-teacher relationships, to permit improved response and interaction
> Helping learners toward the objective of personal relevance and, as practiced by supervisors and administrators, helping teachers to the twin objectives of personal and professional relevance
> Recognizing and accepting different ways of responding, according to learners' individualized styles and needs

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[47] Winnetka Public Schools, *op. cit.,* p. 4.

Stimulating creation and re-creation of a self-image that encourages further development
Taking directly into account the presence of such barriers as alienation, cultural pluralism, and unconscionable pressures
Questioning, probing and responding in ways that lead learners to assume responsibility
Standing aside judiciously to let the learner discover and exercise his own resources
Shifting one's vantage point for viewing learners in action
Placing learners in varying roles
Making development of the learner the chief goal in teaching subject matter
Achieving free affective response and seeing its relevance to intellectual development
Helping learners find order, pattern and meaning in phenomena
Establishing a school environment that encourages teachers to be empathetic and helpful to learners and to each other
Achieving free and constructive communication with learners
Respecting experimentation and supporting experimenters in both their failures and their successes
Helping learners sense the living dynamic of man's creations, as revealed by history and the current scene
Clearing the way, by whatever means, for stretching learners' minds and abilities in creative, self-fulfilling endeavors[48]

In full recognition of the desirability of all such approaches to individualization, and of the necessity of a close pupil-teacher relationship, we should acknowledge the probability that no one teacher can achieve an optimum relationship with each of his pupils. He can try, and in most cases he can probably succeed. In his discussion of the relationship of the teacher to pupils' differences for the Sixty-first Yearbook (Part I) of the National Society for the Study of Education, Jackson insisted that the teacher be treated as a "variable" rather than a "constant" in educational theory. He pointed out two types of facts which relate to the teacher's work with individual pupils: (1) "that some teachers and some pupils just don't mix"; and (2) "that some teachers and some tasks just don't go together."[49]

Our own classification of significant aspects of individualized instruction is briefly presented in the following paragraphs.

Teaching Learners to Learn. Perhaps the most significant step to be taken by the teacher in individualizing instruction is to assess the learning skills of individual pupils and then aid in their further development. This step involves diagnostic testing, by any of the various possible means, pupils' status with respect to such skills as reading, listening, using reference books and other sources of information in the library or classroom, following directions, and so forth. Although each learner has to perfect and extend his own skills, the teacher can be a significant source in demonstrating, individually if need be, particular skills and helping each youngster in his own efforts to check his own progress.

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[48] Ronald C. Doll (ed. and chm.), *Individualizing Instruction.* 1964 Yearbook, Association for Supervision and Curriculum Development, pp. 160–161. Copyright © 1964 by the Association for Supervision and Curriculum Development.

[49] Philip W. Jackson, "The Teacher and Individual Differences" in Tyler, *op. cit.*, pp. 89–90.

Then, as the teacher becomes cognizant of each pupil's status in the learning skills important in the classroom concerned, he finds many opportunities to work with the pupils individually. Special-help conferences, individual assignments, review of the pupil's work with him, and similar devices are used to personalize the teaching of needed skills.

Teacher-Pupil Dialogue. Although the essential importance of teacher-pupil interaction in learning is well known and frequently commented upon there is relatively little interaction of the teacher with individual pupils in eye-to-eye contact in many classrooms. The interaction which makes most difference to the learner is his personal, private conversation with the teacher whom he likes and respects as they attempt to work out goals and problems of his learning. True individualization must provide a maximum number of such individualized conversations of teacher and pupil at whatever time and place they can easily and frequently be arranged.[50]

Guided Independent Study. We have already commented on the trend toward independent study arrangements in both elementary and secondary schools (see Chapter 10) and will also deal with the teacher's planning for this in a later chapter (13). Here we should point out that independent study is not to be confused with uniform homework or seatwork or supervised study in study hall situations. The concept of independent study which has real vitality is that of the individual learner's pursuit of a question, problem, interest, or hunch about which he is deeply concerned. In this pursuit, he needs at many points the guidance of a skilled teacher in planning the project or investigation, in gaining access to sources of information, in talking through difficulties perhaps to the point of making new plans, and in reporting and assessing the study.

Use of Pupil Self-Evaluation. Truly individualized instruction cannot be evaluated in terms of group norms and standards. The ultimate criterion of this instruction is the self-development of the learner, and only he can accurately assess this development. The teacher can help, of course, in raising questions, in listening to the learner's self-evaluation and giving reinforcement and counsel, and in suggesting types of exercises, checklists, and other devices which the learner may use to sharpen and focus his self-evaluation.

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[50] In his treatment of empirical personalism in *The Person and Education* (Columbus, Ohio: Charles E. Merrill Books, Inc., 1964), Harold O. Soderquist emphasizes the "I-Thou dialogue" as "the heart of the matter" and states that "the openness of person-to-person channels between teacher and learner requires free emotional response, one to the other" (pp. 185–186).

The Teacher's Interest in the Individual. We do not believe that instruction can be individualized mechanically by the teacher any more than curriculum differentiation can be achieved by grouping of pupils on a single factor. Underneath any plan of individualization of instruction must be a deep and abiding interest in the individual learner. The most effective organizational structure of any school is the one that best enables an outstanding teacher to become acquainted with and interested in boys and girls, and thereby work effectively and stimulatingly with them. The program and organization of the school can only enable a committed teacher to help learners whom the teacher wants to help and who want his help.

Suggestions to teachers for their consideration in planning more specifically for the individualization of instruction are given in Chapter 13.

FOR FURTHER STUDY

Bloom, Benjamin S., Allison Davis, and Robert D. Hess. *Compensatory Education for Cultural Deprivation.* New York: Holt, Rinehart and Winston, Inc., 1965.

The nature of cultural deprivation as it relates to education with implications for schools and society. Includes an extended, annotated bibliography on education and cultural deprivation.

Coleman, James S. *The Adolescent Society: The Social Life of the Teenager and Its Impact on Education.* New York: The Free Press of Glencoe, 1961.

Report of a significant research on the values, aspirations, and social systems of adolescents. The implications for secondary education are summarized in Chapter 11.

Conant, James Bryant. *Slums and Suburbs: A Commentary on Schools in Metropolitan Areas.* New York: McGraw-Hill Book Company, Inc., 1961.

Analysis and contrast of schools in slum and suburban districts of large urban centers. Chapter 3 deals with problems of school curriculum and organization.

Doll, Ronald C., ed. and chm. *Individualizing Instruction.* 1964 Yearbook of the Association for Supervision and Curriculum Development, NEA. Washington, D.C.: The Association, 1964.

Chapters 4 and 5 offer especially specific suggestions on school and classroom provisions for individualizing instruction.

Dunn, Lloyd M., ed. *Exceptional Children in the Schools.* New York: Holt, Rinehart and Winston, Inc., 1963.

Comprehensive treatment of educational programs for major exceptionalities among children.

Educational Policies Commission. *Education and the disadvantaged American.* Washington, D.C.: National Education Association, 1962.

Describes educational problems of disadvantaged children and youth, and suggests provisions needed in the schools.

FLANAGAN, JOHN D., AND OTHERS. *The American High School Student.* Pittsburgh: American Institutes for Research, 1964.

This report of one major aspect of Project TALENT includes many data about high school students: their knowledge, plans, aspirations, interests, experiences in their first year after high school, and so on.

HAVIGHURST, ROBERT J., PAUL HOOVER BOWMAN, GORDON P. LIDDLE, CHARLES V. MATTHEWS, AND JAMES V. PIERCE. *Growing Up in River City.* New York: John Wiley & Sons, Inc., 1962.

Report of a nine-year longitudinal study of an entire public school age group from eleven to twenty years of age to determine factors most closely related to competence in young adulthood. Relates social backgrounds to problems of growing up.

PASSOW, A. HARRY, ED. *Education in Depressed Areas.* New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Many aspects of social and educational problems are dealt with in this symposium; see especially Parts I and V on educational programs.

PASSOW, A. HARRY, ED. *Nurturing Individual Potential.* Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1964.

Includes the papers reporting research on various factors affecting the nurturing of individual potential, presented at the Seventh ASCD Curriculum Research Institute.

SCREIBER, DANIEL, ED. *The School Dropout.* Washington, D.C.: Project Dropouts, NEA, 1964.

Various papers describe societal factors relating to the dropout, and implications for the school program.

TORRANCE, E. PAUL. *Education and the Creative Potential.* The Modern School Practices Series, No. 5. Minneapolis: University of Minnesota Press, 1963.

Based on Torrance's research, some specific reports of which are included, many suggestions for developing children's creative potential are offered.

TYLER, FRED T., CHM. *Individualizing Instruction.* The 61st Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1962.

Following extended analyses and illustrations of individual differences, Chapters 11–14 present various practices for individualizing instruction.

PART 5

PROCEDURES OF CURRICULUM PLANNING

CHAPTER 12

Cooperative Curriculum Planning in the School and School System

In this, the last section, we turn our attention to procedures of curriculum planning. The present chapter is devoted to curriculum planning in the individual school and the school system, with some attention to state and local relationships in curriculum planning. In Chapter 13 we discuss the teacher's planning for his own classroom, and in Chapter 14 his selection and use of resources. Chapter 15 sums up the role of curriculum leadership.

Recognition of the levels of curriculum planning as defined in Chapter 1 is basic to the consideration of procedures of curriculum planning. The professional educator may be involved in curriculum planning in his own classroom, with other teachers at his grade level or in his subject department, with the school faculty and its committees in his school, as a representative of his school or his area of responsibility in committees of the entire school system, or as a member of some state-wide curriculum planning group. Some educators also become involved in what we have considered as external curriculum planning organizations such as committees of professional associations, advisory committees of the United States Office of Education, commissions of accrediting associations, and in similar regional, national or even international extralegal but influential organizations.

THE CHARACTERISTICS OF COOPERATIVE CURRICULUM PLANNING

Effective curriculum planning for the school and school system is, we believe, always cooperative planning involving the persons who are responsible for the curriculum of the school and system, or their representatives. The trend in curriculum improvement procedures of the past century has been toward an increasingly close identification of improvement goals with teacher concerns and efforts. Thus an improvement in the curriculum has resulted from the cooperative goal-seeking activities of those who actually direct the curriculum experiences of their pupils.

The improvement of the curriculum planned for pupils who participate in the work of more than one classroom accrues from a pooling of efforts and ideas by those who direct these experiences. Hence curriculum planning by a group of teachers is seen as a particular type of group process.

To illustrate the operation of group process in curriculum planning, that is, the characteristics of cooperative curriculum planning, the following paragraphs draw liberally upon a three-year study by the principals and other personnel of the junior high schools of Chattanooga (Tennessee) of their junior high school program, as recorded in a collection of reports of various meetings held in Chattanooga during the period, 1958–1962, and entitled "Chattanooga's Junior High Story."[1]

Common Goals

In the Chattanooga Junior High Study, as so frequently happens in curriculum planning activities extending over more than a brief meeting or a short series of brief meetings, the original goals of the study were changed rather significantly. The initial survey of problems made at the organization meeting of junior high school representatives on September 16, 1958, yielded a long list of forty-seven questions of varying specificity and depth. These forty-seven questions were categorized by the steering committee into eight groups: pupil personnel, curriculum, school organization, guidance services, activities, community relations, teacher personnel, general, and miscellaneous.

When the group met again on October 8, 1958, the initial list of problems was reorganized for study purposes into four groups: (1) school studies of pupil population, (2) administrative studies, (3) surveys of successful practices, and (4) experimental studies. The statement of problems within these categories remained the same, and the following five problems from the original list were kept in the headings "General and Miscellaneous":

1. Can we take a look at ourselves, identifying our strengths and weaknesses?
2. How can we provide better for individual differences?
3. How can the junior high school build better on the work of the elementary school and lead better to that of the senior high school?
4. What are the proper functions of the junior high school?
5. How can there be better communication between the junior high schools?

As the study developed in Chattanooga these latter questions really became the central ones considered by the principals' study group.

There followed some exploration of the various categories of the junior high school problems in Chattanooga during a period of about four months.

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[1] See Elizabeth L. Dalton and Nolan Estes, "Chattanooga's Junior High Story" (Chattanooga: Division of Instruction, Chattanooga Public Schools, Spring, 1962). Also see Elizabeth L. Dalton and William M. Alexander, "Improving the Junior High Curriculum: A Case Study," *High School Journal,* 44:226–231 (April, 1961). Excerpts are reprinted by permission.

In February, 1959, the original list of problems was reduced by the planning group to sixteen identified as city-wide problems and eight cited as being significant in one or more schools. The teachers, supervisors, and principals who were members of the various study groups existing in March, 1959, then gave a priority rating to these twenty-four problems, and a rank order was computed for the problems. The highest-ranking six problems which follow were agreed upon for detailed study and action programs at a meeting of the central study committee on March 26, 1959:

1. Who is an underachiever?
2. Who is a failure?
3. What is the most effective way to deal with educational retardation in specific areas?
4. How do we improve study skills?
5. How can we provide for a wide range of achievement?
6. How can we provide for high-ability students?

The further progress of the Chattanooga study was concentrated on these last six questions and many of their ramifications. Individual faculties made analyses of pupil progress in their schools, many new programs were developed school by school, and considerable modification was made in city-wide policies having to do with matters affecting pupil progress. In the description of the Chattanooga project Dalton commented that "an inventory of problems after the first few months' participation indicated a definite trend toward interest in the individual pupil rather than in administrative devices."[2] It should be noted, however, that from the very beginning there was a common purpose, stated in the foreword to the report of the study as "the search for a vital, flexible junior high school program wherein boys and girls would be as important as subject matter."[3]

In curriculum planning, whatever the planning group and the problem for immediate focus, the common goal of improved learning experiences must be central. This goal may be variously interpreted, and even when points of view are in harmony, there may be many subgoals that provide agenda for different individuals and groups. For the group at work there is no more important help than that which comes through clear definition of goals, earnest efforts to recognize mutuality of interests and purposes, and consistent evaluation of contributions, activities, and results in terms of the goals set by the group.

Adequate Organization

Although appropriate organizations for the individual schools and the school system may differ in various respects, they do need to be related to each other and also to involve certain common principles. As we see it, the fundamental principle is that of involvement of all personnel in the school and system who are concerned with development of the curriculum. One type of organization developed for this purpose is explained in the following paragraphs from the account of the Chattanooga Junior High Study:

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[2] Dalton and Alexander, *op. cit.*, p. 230.

[3] Dalton and Estes, *op. cit.*, p. 1.

> The involvement of all personnel at the junior high level was one of the aims and has become one of the strengths of the study. Three groups were organized immediately after the initial general session; principals and guidance teachers formed their respective system-wide committees. A third was formed from building delegates chosen cooperatively by principals and central office staff to represent all instructional areas. The membership of only the third group has changed during the progress of the study. These committees dealt with inventories of problems relating to administration, studies of pupil population and successful classroom practices, respectively; however, all faculties soon became participants in the activities of all three committees.
>
> A steering committee composed of representatives from the instructional staff, principals and teachers, assumed over-all responsibility for the development of the study. The instructional staff worked with each committee and group in the execution of specific plans, both at the individual school and system-wide levels.[4]

How the organization carried over into the individual school is illustrated by one of the specific major aspects of the Chattanooga study:

> School studies of pupil population were carried on under the general supervision of the director of guidance, who, with a committee of teachers, had devised a guide sheet to gather pertinent data about the educational and personal background of pupils in each homeroom. Every homeroom teacher was enabled to take a close look at his pupils, and summary sheets were duplicated and distributed to all classroom teachers who taught this particular homeroom. Studies of pupil population have continued into the third year, for faculties have recognized that the information gathered is essential for strengthening guidance services and for differentiating classroom instruction. Individual school charts developed by principals and/or guidance personnel have enabled each faculty to understand the variables which affect pupil achievement, including socio-economic background, personal adjustment and general aptitude, and become more sensitive to the unique needs of their own students. Case studies have been made and discussed in faculty sessions as a further means of studying individual differences, of seeking reasons for underachievement among the more capable, and proposing means to stimulate all students.[5]

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[4] Dalton and Alexander, *op. cit.*, pp. 228–229.

[5] *Ibid.*, p. 229.

Competent Leadership

In the Chattanooga Study, leadership was shared by many people: members of the central office staff, including the superintendent of schools, principals, guidance counselors, classroom teachers, and the consultant from a nearby teacher education institution, at times accompanied by graduate students who also at times took leadership roles. Each of these persons, whether serving as chairman of the principals' study group, the central planning committee, one of the working committees, or an individual faculty member, was greatly helped in his leadership role by the strong support of the superintendent of schools. Much help also came from the flow of materials reporting previous meetings of individual groups to all persons concerned and coming from the general secretary of the study, a member of the central office staff (also the first-named author of the two publications cited in this illustration, Elizabeth L. Dalton).

Our experiences in curriculum planning suggest that an essential characteristic of good process is the cooperative performance of the leader. He must recognize that every individual in the group is a potential leader who may at any time direct group thinking by questions, observations, and suggestions. The leader provides every opportunity for all potential leadership within the group to exert itself. At the same time he gives personal direction to the group enterprise when this seems critical. Among the specific tasks of leadership, not necessarily of a single person designated as chairman, but of all who share the leadership role, are the following:

1. Maintain a comfortable environment.
2. Secure frank, full expression of ideas.
3. Summarize faithfully agreements or decisions reached and group progress from time to time.
4. Help record keepers in the maintenance of adequate notes as to the flow and results of discussions.
5. See that alternative courses of actions and positions on issues are identified.
6. Determine the consensus when appropriate.
7. Recognize fully the contributions of group members.

Group Decisions

From his experience as consultant to the Chattanooga schools during the period of the junior high study, one of us can attest to the emphasis placed by Superintendent John W. Letson on the role of the school principal and faculty in the decision-making process. This philosophy was observed to carry over quite clearly in the development of the junior high study. In fact, the study was begun with a decision in February, 1958, by the Chattanooga junior high school principals to undertake such a long-range study. They had made an informal inventory of several trouble spots in their respective schools and decided, rather than simply doing a "troubleshooting" job, to attempt a more thorough evaluation and curriculum development program. The actual initiation of the more formal study was deferred until the following September, when some preliminary steps in organization could be effected.

The reports of the various meetings of committees and faculties and principals contained in "Chattanooga's Junior High Story" clearly indicate that decisions about next steps, actions to be taken in the schools, and policy changes were deferred until there had been adequate study of the problems concerned, but that the decisions were made, and made by the responsible group, when this point had been achieved. Generally speaking, the decisions concerning the Chattanooga junior high schools were made at the individual school level. Thus at a summarizing and "looking back" session held October 21, 1960, a report was given of specific improvements which had been made in the schools. These reports were made by principals, and the following excerpts indicate the variation among schools and yet the innovations which had been determined within individual schools:

1. The almost but not complete system-wide adoption of a block schedule (two- and three-hour blocks in grades 7 and 8)
2. Various plans for an additional or seventh period in many schools to increase participation in enrichment and remedial activities in various areas
3. Greater individualization of scheduling as indicated in one school by enrollment of girls in industrial arts and boys in home economics
4. Additional basal reading instruction in schools previously not offering this
5. Increased exploratory opportunities in some schools in the fields of typewriting, industrial arts, and music
6. Various improvements in physical education, including experimentation with coeducational classes in one school and a daily program of physical education in several
7. Addition of French to ninth-grade electives in one school
8. Elimination of study halls in some schools and in others conversion of large study halls into several directed study groups with teachers assisting in the study program
9. Experimental organization of "developmental" rooms for pupils with more or less severe learning difficulties

Participants in group curriculum planning activities should be fully cognizant of the limitations of their decision-making powers. Sometimes curriculum planning groups have been observed in assuming responsibility for decisions which concern individuals or schools not represented in the planning group. As a result the decision is frequently resented or disregarded. Furthermore, groups are sometimes frustrated by not understanding what decisions they can make. Accordingly they ask, "Shouldn't the superintendent (or the supervisor, or the principal, or the consultant, or someone else) decide this?" A clear understanding of the group's functions and limitations, together with a consistent regard for the limitations and discharge of the functions, is essential in effective group activities.

Clear Communication

In the Chattanooga illustration, communication was accomplished primarily by two devices. In the first place, the central group throughout the study consisted of the junior high school principals and members of the central office staff. Although counselors and teachers met with this group on most occasions and there were many related groups which included principals, supervisors, counselors, and teachers, and especially the latter, the burden of responsibility for communication was carried to the individual school faculty by the responsible leader—the school principal. In the second place, each meeting of any group involved in the study was carefully reported. The secretary of the study produced detailed minutes of all meetings, minutes which were more than reports of "who said what" and were primarily reports of issues considered, decisions reached, and plans made. Thus any other individual or group that wished to consult the record could find concise and precise statements for guidance.

Careful analysis of typical curriculum programs indicates that in both the planning and the implementation phases, a major block to action is the failure of those concerned to understand each other. Group decisions are impossible unless each person has an opportunity to express his ideas and have them understood, and to understand the ideas of others. Implementation of plans made by others is obviously impossible unless these plans are fully understood and accepted. Even face-to-face communication breaks down because of semantic and perceptual difficulties. Written communications alone eliminate opportunity for discussion and constitute a most inadequate basis for curriculum planning at all levels. In the planning groups such factors as poor facilities, fatigue, personality conflicts, undefined terms, lack of known agenda, and shortness of time present real communication barriers.

The effectiveness of communication depends very directly on the quality and universality of participation. Communication is a two-way process—and all curriculum planners need to express their lack of understanding to the group whenever this exists. Communication difficulties tend to be minimized when the other criteria we have described —common goals, adequate organization, competent leadership, and group decisions—are in operation.

Supporting Facilities

For the purposes of the Chattanooga Junior High Study a facility of utmost importance was the administrative arrangement and financial support for inter- and intra-system visitation. Note the following arrangements reported:

> In addition to the intensive seminar-type discussions sessions, inter- and intra-system visitation has been regarded as one of the better ways. During the first year of the study, all principals observed the programs in the junior high schools in the Louisville and Fayette County (Kentucky) systems. They sought answers to specific questions pinpointed through the problems inventory mentioned earlier. During the second year, principals spent an entire day with six intermediate-grade teachers in different Chattanooga schools to study methods of teaching reading and of unit instruction. Later in the year, principals and central office personnel visited and observed in the Sarasota (Florida) schools, studying particularly junior high school administration, scheduling, guidance services, and instruction in block classes.[6]

Another significant need in Chattanooga was for opportunities for teachers to have in-service education in some areas. During the second year of the study, courses in teaching reading at the junior high level, in organizing guidance services particularly for young adolescents, and in planning instruction for the block program were made available to many teachers.

The chief facilities needed in most curriculum planning activities have a common denominator in finance. Money is needed not only to support visitation and in-service education programs but to provide released time for school personnel to concentrate on curriculum planning jobs. Stipends for summer work and other additional duties, honoraria and expenses for consultants, and funds to support research are among the urgent needs. Our own experiences indicate quite clearly that the curriculum planning programs which make the most difference in developing superior learning experiences for children and youth are those which are developed in school systems having a relatively high level of financial support, although there are marked exceptions. In Chattanooga, for example, where there was not exceptionally high financial support, the administration regarded improved educational programs as being the best basis for improved community support of the schools and therefore was willing to budget the relatively small amount needed.

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[6] *Ibid.*, pp. 230–231.

ORGANIZATION FOR CURRICULUM PLANNING IN THE INDIVIDUAL SCHOOL

In their description of approaches to curriculum improvement, McNally, Passow, and associates observed that "a school staff working on program development too often engages in a bewildering and uncoordinated array of endeavors, all ostensibly aimed at instructional improvement."[7] Happily, however, our own observation is that a great deal more consideration has been given in the 1960's than before to ways and means whereby the individual school faculty may work most effectively to bring about improvement in the curriculum experiences of its students. Wherever this concern exists, some organization of the faculty is needed to develop improvement plans systematically and effectively. Some features of such organizations are described in this section.

Communication and Coordination

The focus of effective organization for curriculum planning within the individual school (or the school system) must be on optimum communication of ideas and practices among school personnel and careful coordination of planning and improvements efforts so as to maintain a well-ordered school program and change process. This focus becomes increasingly difficult to maintain as the school population becomes larger and school operation more complex. The communication problem is especially acute if innovative practices are to spread from pilot classrooms to the school as a whole or from a pilot school to other schools in the system. In his review of generalizations derived from reports of innovations in the significant volume he edited, Miles analyzed the problem of "linkage" (from pilot group to the larger unit, such as from a classroom to the entire school) in part as follows:

> The question remains: How will innovations established in an innovating, "pilot study" group diffuse outward to the remainder of the target system? Effective innovative enterprises usually require physical and social isolation, but intellectual and professional connectedness (i.e., linkage) to the surrounding context. The isolation frees new projects from conformity restraints, aids focused work on the innovation, and protects both innovating group and target system from the consequences of failure. But adequate linkage is required as well, or the pilot group may

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[7] Harold J. McNally, A. Harry Passow, and others, *Improving the Quality of Public School Programs: Approaches to Curriculum Development* (New York: Bureau of Publications, Teachers College, Columbia University, 1960), p. 59.

> not be able to survive, let alone cause diffusion of its work in the wider system.[8]

In his further attempt to draw generalizations as to how to facilitate "adequate linkage between innovating groups and target systems," Miles noted the importance of choosing innovators who have a direct relationship with those who make the decisions relevant to the innovation, and he also emphasized the importance of communication arrangements:

> In addition, it seems essential to create explicit communication channels between persons in and out of the innovating group, particularly at a peer level. Such channels not only supply feedback on the progress of the innovation's acceptance and development, but serve to increase the credibility of innovators and add support from the environment. The creation of new structures to aid linkage is often overlooked, particularly when the innovating group has been set up on a temporary basis, but seems essential.[9]

The implementation of these principles in the individual school involves such specifics as these we suggest:

1. Adequate encouragement and support of innovators by the school principal and other status leaders
2. Development of pilot studies and demonstrations with the knowledge —preferably the active cooperation—of the entire faculty, and especially of teachers who have teaching responsibilities similar to those in the pilot unit
3. Collection of evidence about the progress and outcome of the innovation
4. As much reporting to, or observation by, concerned members of the faculty as possible
5. General understanding of the principle that experimentation as a means of curriculum improvement will be encouraged if other teachers wish to undertake extensions or duplications of pilot studies

Not all curriculum planning is devoted to innovation and pilot studies, of course, but sooner or later the planning process introduces change, and some individual or group must take the lead. Although Miles observes in regard to the initiation of change that "the sequence is *not* that of careful school-wide or system-wide assessments of the pros and cons of an innovation, accompanied by various forms of rational persuasion and missionary fervor, culminating in a general decision to go ahead,"[10] we would emphasize that general diffusion of an innovation must involve a commitment of the total group (that is, the faculty) involved. It is in the interim between the introduction and general acceptance of new curriculum plans that communication between the innovators and the noninnovators is essential.

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[8] "Innovation in Education: Some Generalizations" from *Innovation in Education* by Matthew B. Miles. New York: Bureau of Publications, Teachers College, Columbia University, 1964, pp. 653–654. Miles' footnote and cross-references omitted.

[9] *Ibid.,* p. 655. Footnote and cross references omitted.

[10] *Ibid.,* p. 653.

In the individual school most efforts toward effective communication and coordination involve some of the following types of organization: school councils, faculty meetings, grade level (elementary schools), and subject or departmental (secondary schools) meetings, working committees, and various types of service corps. Each of these organizations is briefly described in the paragraphs which follow.

School Councils

The possible organization of an individual school for curriculum planning appears in Figure 14, which shows the following possible types, and their relationship, of school councils participating in curriculum improvement efforts:

1. *A school-community council designed to provide representation of each neighborhood served by the school, and to secure optimum communication with parents and other citizens.* For the small elementary school, representation may be a matter of selecting a representative from each block. For the large high school, the representatives may need to be selected from the feeder school groups.
2. *A student council organized around the basic type of pupil groups (grades, high school year, homeroom, or "Miss Smith's class") within the school.* The important principle here is to provide representation for all students and an opportunity for discussion within the basic pupil units of proposals to and from the council.
3. *A staff council organized on a representative basis if the staff is large or including the entire staff if it is small.* If the group is too large (over twenty-five, for example) for effective work as a unit, some organization may be devised to provide representation of such units as grades or departments, special service personnel, and administrative and managerial personnel.
4. *A coordinating council to include representatives of the foregoing three groups (with a parent or teacher representing student councils in elementary schools, if this seems more feasible) and perhaps representatives from the system-wide planning group.*

Additional councils may be organized if needed. Particular goals deserving strong interest at a particular time may create the need for special councils. Also, councils organized from business or industry, from the local college or university, or from the school alumni may be helpful as advisory groups.

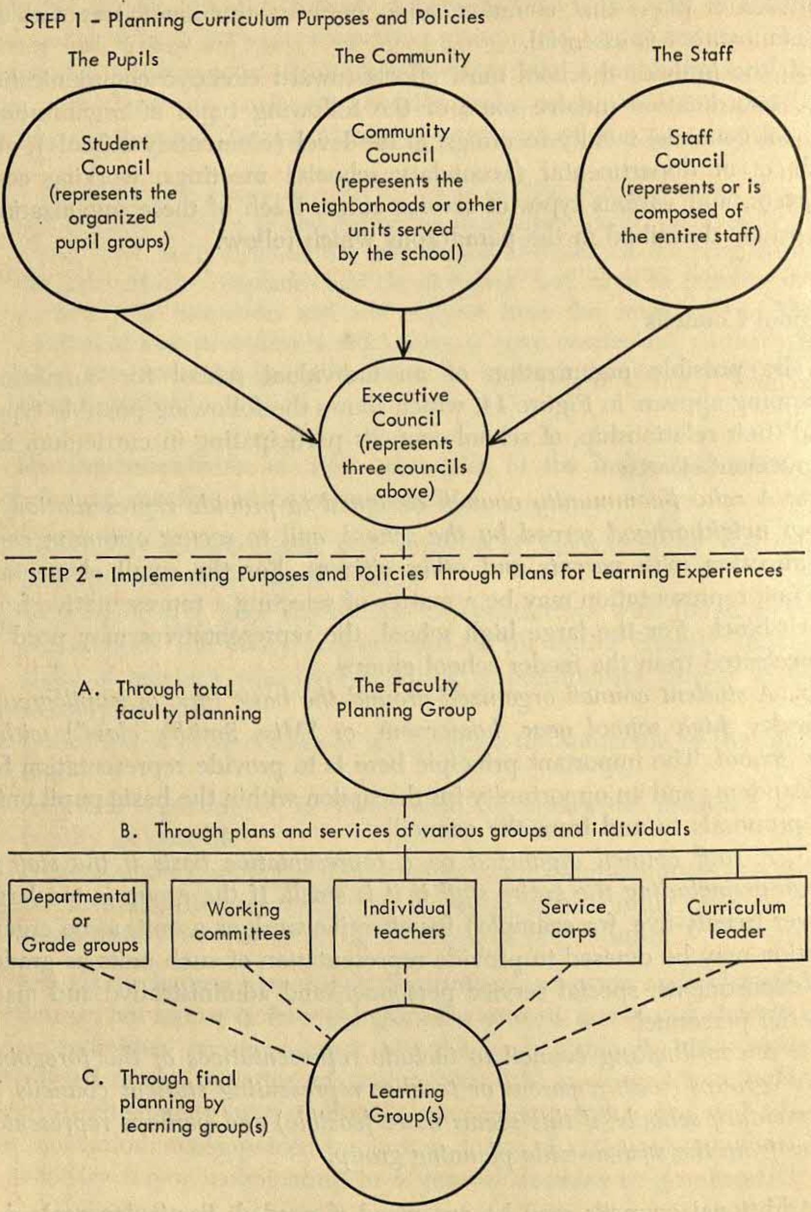
STEP 1 – Planning Curriculum Purposes and Policies
The Pupils
The Community
The Staff
Student Council (represents the organized pupil groups)
Community Council (represents the neighborhoods or other units served by the school)
Staff Council (represents or is composed of the entire staff)
Executive Council (represents three councils above)
STEP 2 – Implementing Purposes and Policies Through Plans for Learning Experiences
A. Through total faculty planning
The Faculty Planning Group
B. Through plans and services of various groups and individuals
Departmental or Grade groups
Working committees
Individual teachers
Service corps
Curriculum leader
C. Through final planning by learning group(s)
Learning Group(s)

Figure 14: Organization of the Individual School for Curriculum Planning

The function of a council is to provide for systematic expression of opinion regarding school needs and goals. The council organization may also be very effective in launching innovative practices and in evaluating these as they go into operation. The coordinating council serves as the interlocking group for bringing together ideas, proposals, and recommendations from the constituent bodies, and relaying these to the final decision-making authority, whether this be the school faculty—as it generally should be—or the individual school administration, or the system-wide curriculum planning group or administration. Of course, such an elaborate organization is required only where there are well-organized student councils and community councils in addition to the basic school personnel group and where the school is of considerable size.

Faculty Planning Group

We consider it neither possible nor desirable for parents, pupils, laymen in general, and teachers to participate in identical roles in each step of curriculum planning. Parents and pupils participate in planning as they propose needs, criticisms, and goals, and they participate in making plans work as they give their energy and enthusiasm. At the same time, a major share of planning and execution is the responsibility of the technician—the teacher. There must be times when proposals are shifted down to specific plans for changing the total school program and for changing instruction in individual classrooms. It is at this point that the faculty group makes specific decisions and takes specific actions.

For example, one of us recalls the following types of decisions as among those one elementary school faculty had to make in the course of a year's study of the school program:

1. What interruptions in the work of classrooms could be avoided (for example, what arrangements could be made for collecting lunch money by someone other than the classroom teacher)?
2. What changes could be introduced in the marking and reporting systems to reduce pressures on pupils and teachers? Should there be separate marking systems for primary and for upper grades?
3. How could teachers of the same grade cooperate better? How could the teachers concerned arrange to see a school organized on a team-teaching basis?
4. How could available teaching machines be used more effectively?
5. What changes should be made in the use of the library as a full-time librarian became available?
6. At what level should a science television program be used? How?
7. What materials should be used to place more emphasis on current events in the upper grades?

8. How should the services of special teachers in physical education, music, speech, and French best be utilized?

These questions, raised in various faculty planning sessions, were usually referred to *ad hoc* committees for study and recommendations back to the faculty. In some cases (for example, question 1) decisions were made and action was taken on the report of the committee. In others, plans were made for pilot studies (for example, question 3) for the following year. In still others (for example, question 4) at least one teacher volunteered to try out some plans at once. Thus, the total faculty served as a screening group for problems and proposals to be studied more intensively by individuals or small groups, as a decision-making group on committee recommendations and some matters of school-wide interest, and as a planning group for pilot studies. It was not expected that the faculty had to be consulted before experimentation was begun in the individual classroom, but it was believed that change would be more orderly and successful if there was general faculty understanding.

Grade and Departmental Groups

In larger elementary schools the general faculty may be broken down into primary and intermediate groups or even into groups of first-grade teachers, second-grade teachers, and so forth. Such groups have important functions to discharge in the development of curriculum plans as they work out resource units, agree on the objectives and scope and sequence of instruction, and review together new teaching materials and aids. In larger schools such groups may become so self-contained as to detract from consideration of functions and problems of the entire school and to create difficulties in the articulation of work from grade to grade or level to level. This situation may be obviated in the ungraded elementary school or in team-teaching arrangements such as those described in Chapter 10.

In larger secondary schools and in elementary school faculties organizer departmentally, considerable curriculum planning may be done through the departmental groups in science, social studies, mathematics, and other areas. Here again the departmental groups may work out resource units, agreements as to scope and sequence, and plans for initiation and evaluation of instructional innovations. Unless this kind of planning is coordinated through the general faculty group or some representative coordinating council, each department sometimes proceeds without reference to the other, with resulting inconsistencies and conflicts in plans. These difficulties may be overcome also by cross-departmental representation and, especially at the junior high school level, by a core type of program in which teachers from two or more subject fields work together in curriculum planning and instruction.

Working Committees

Most school faculties have a number of working committees organized to do particular jobs for the faculty. Many aspects of curriculum planning are best accomplished by small groups (from two to five or six, usually): preparing materials, gathering data, making arrangements, proposing detailed plans, and offering recommendations for reactions. Ideally, the central planning group of the faculty should be able to call on any person within the school, the community, or even the system-wide organization to do a job for which that person is best qualified. In practice the assignments have to be made to those who are qualified, available, and willing, but sometimes the tasks must go undone because such persons are not at hand. The school principal, with his intimate knowledge of the qualifications, availability, and commitments of individual teachers, should have as one of his major functions counseling with faculty planning groups and individual teachers to establish the best organization of working committees for all jobs to be done in curriculum planning. Whether he appoints these committees or actually seeks volunteers is less important, we feel, than the way in which he works with the individual teacher and the committee. The fundamental need is to have the best qualified and most interested persons working on essential jobs.

Service Corps

Although these groups may be called committees, task forces, or work groups, what we like to think of as "service corps" are needed in every school concerned actively with curriculum improvement. A service corps of parents may be helpful for different purposes—communication with other parents, arranging parent-teacher conferences, directing pupil activities while teachers work together, serving as resource persons in the classroom, and conducting out-of-school experiences of learners. Service corps of pupils may be and are used for such services as reviewing textbooks, other printed materials, and audio-visual aids for their utility in particular classes; conducting surveys in the community for information needed in curriculum planning; and, especially, evaluating current and previous learning experiences.

Citizens of the community in general may and do help in curriculum planning by arranging for out-of-school learning experiences and by serving as resource persons in the schools. A well-maintained register of valuable community persons and services seems desirable in almost any school program. In the larger school a formal organization of service corps may be needed. Perhaps the greatest service adults in the community can render is in connection with school evaluations, as parents and citizens in general give their reactions to well-organized opinion polls and other kinds of inquiries about school practices.

In general, the services provided by parent, pupil, and citizen corps require flexibility and ingenuity. Again, the school principal should be in a position to organize such groups as needed to facilitate curriculum planning within the individual school.

Leadership in the School

All the groups we have described provide leadership services in curriculum planning. However, there are particular roles for the status leader—the principal—and perhaps a curriculum coordinator or assistant principal in charge of curriculum and instruction. Although the role of curriculum leaders is fully discussed later in Chapter 15 we should emphasize here the fact that organized efforts toward curriculum planning in the individual school require the stimulation, coordination, and facilitation of its leader.

Generally, it is the principal who must provide these services. Evidence abounds of his influence in determining whether or not change will occur in the school.[11] An article by one principal in a series entitled "The Nature of Change" published by the National Association of Secondary-School Principals astutely noted:

> So a principal, to provoke change, must subtly discredit the *status quo* without condemning past teaching. He must inspire the faculty to greater aspirations. He must suggest higher plateaux of performance and allow for a flow of staff suggestions about how to get there.[12]

Cronin commented further on these specific tasks of the principal: studying curriculum reports and materials, informing the school community and clientele of curriculum changes, requesting funds for the costs of innovations, modifying schedules, arranging time for teachers to do curriculum planning, working with other principals for articulation, planning evaluation, and being alert to the difficulties involved in changing practices. To this list we would add the arduous but primary responsibility of maintaining throughout the school a faith in the processes of planning and change as means to the end of an improving educational program.

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[11] See "Innovation in Education: Some Generalizations," *op. cit.*, pp. 641–642, for a summary of generalizations relating to the role of "authority figures" in the introduction of innovations.

[12] Joseph M. Cronin, "The Principal's Role in Change," *Bulletin*, National Association of Secondary-School Principals (No. 283), 47:29 (May, 1963).

For the school which can afford an additional leadership person either of two arrangements are usually followed: (1) designation of an administrative assistant to the principal to give the latter adequate time for curriculum leadership; or (2) designation of a qualified person as curriculum coordinator. In schools that cannot afford additional personnel, various somewhat less satisfactory possibilities are followed. The principal's functions may be reorganized so that he can give maximum time to curriculum leadership. A competent teacher or other person may be released part time from other duties. A librarian or counselor competent in the curriculum field may serve part time as a curriculum director. A curriculum coordinator may be shared by several schools in contiguous neighborhoods. In larger systems, one curriculum coordinator may be assigned to each district within the system to work with the high school and its feeder junior high and elementary schools.

Characteristics of a Good Organization for the Individual School

Our convictions as to the essential characteristics of a good individual school organization for curriculum planning may be summarized as follows:

1. Curriculum planning efforts are organized in terms of goals resulting from the considered thinking of all persons directly affected.
2. Each person and each group are utilized in terms of their potential contributions rather than with respect to sharp lines between pupil, parent, layman, and teacher participation.
3. Each job assigned a committee or an individual is in terms of the needs of the total program with final decisions made with reference to the program of the school as a whole rather than to departmental or other special interests.
4. An atmosphere of cooperative planning and constructive evaluation pervades all groups and the school as a whole.
5. A continuing search is made by leadership to identify services, materials, facilities, and persons that can contribute to curriculum planning and to utilize these as possible.

ORGANIZATION FOR CURRICULUM PLANNING IN THE SCHOOL SYSTEM

The organization for curriculum planning at the system-wide level varies with many factors—the size of the system, the philosophies of the relationship of the individual school to the system as a whole, and the interest of school leaders in experimentation and improvement. In this age of a rapidly changing society and man's ever-increasing knowledge, the schools have no choice but to make an organized effort toward incorporating in the educational program the best and most current information available.[13]

Organizations of the school system for curriculum development were classified in a study by Doll, Passow, and Corey as "centralized," "decentralized," and "centrally coordinated." The position of these authors regarding the relative strengths of these approaches was that "a centrally coordinated point of view gives promise of effecting various plans of organization for curriculum improvement."[14] We, too, definitely hold the position that the function of the central administration and curriculum staff is to coordinate and, of course, to stimulate curriculum improvement at the level of the individual school. Hence most of the examples we have selected to describe promising practices of organization in school systems are of this centrally coordinated type.

System-wide Improvement Projects

We recognize the necessity of the "broken-front" approach to curriculum improvement in which specific subject areas or other curriculum components need to be attacked singly from time to time. However, we ourselves are satisfied that curriculum improvement is of such dimensions in many if not most school systems as to require a *comprehensive* program of appraisal and action. As we see it, such a program needs to be developed in four steps:

Step 1: Identification of curriculum needs. In this initial step, which may require an extended period of time of perhaps as much as two or three years, representative groups of the school system must make a clear determination of strengths, weaknesses, and needs. For example, in the Roanoke (Virginia) City Schools, where a comprehensive self-study was initiated in 1962, a first step was to define the apparently accepted jobs of the school system. Seventeen such jobs were gleaned from the schools' existing statements of curriculum objectives and policies:

1. The ability to read
2. The ability to write
3. The ability to speak (English and, for many students, a second language)
4. The ability to listen
5. The ability to compute
6. The ability to observe
7. Knowledge, understanding, and appreciation of the fine arts

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[13] See Project on the Instructional Program of the Public Schools, *Schools for the Sixties* (Washington, D.C.: National Education Association, 1963), pp. 118–120, for the project's related recommendations.

[14] See Ronald C. Doll, A. Harry Passow, and Stephen Corey, *Organizing for Curriculum Improvement* (New York: Bureau of Publications, Teachers College, Columbia University, 1953), p. 37.

8. Knowledge, understanding, and appreciation of the practical arts
9. Knowledge, understanding, and appreciation of literature
10. Knowledge, understanding, and appreciation of the social studies
11. Knowledge, understanding, and appreciation of the natural and physical sciences
12. The ability to think objectively, creatively, logically, intuitively, and independently
13. A sense of responsibility for self-direction
14. Some ethical and spiritual values
15. Sound mental and physical health
16. Knowledge of and belief in our American democracy and an appreciation of the worth of the individual and of the family in our society
17. Career interests

Once these jobs were determined by a steering Committee of Twelve —representatives of the central office staff and the elementary and secondary schools—a Job Analysis Committee of about ten representatives of elementary and secondary schools was organized for each of the seventeen jobs to carry on a review of planned learning experiences which contributed to the job's accomplishment. Each group attempted to evaluate present accomplishments and to determine needs for future improvement.

After needs are determined there is still the significant phase of setting priorities. In Roanoke the Committee of Thirty-six (chairmen and recorders of the seventeen Job Analysis groups, plus the school superintendent and a consultant for the study) designed in the summer of 1963 a guide for school self-study which called for the collection of rather specific evidence as to the extent of the need for improvement with respect to each of the jobs. During the following year each of the forty school faculties used the guide for each job to evaluate its own performance. Areas of strength and weakness were noted, plans of both immediate and long-range types were specified, innovations to be investigated were suggested, and needs for implementing the plans were itemized. A summary of its self-study was also prepared by each school faculty, with a plan for preparatory steps for improvement to be taken by task forces during the summer of 1964.

Step 2: Investigation of innovative practices. In school curriculum improvement probably the major, and in some cases the only, method of improvement is innovation. Whether borrowed or adapted from another school situation or invented in the local school, any change is in effect an innovation in the situation where it is introduced. In the Roanoke School Improvement Program, the plan called for extensive investigation of innovative practices which appeared promising in terms of the determined priorities. For this purpose the Roanoke Committee of Twelve began in 1962–1963 to hear consultants' ideas as to innovative and frontier practices. Even earlier a group of Roanoke school people and some school board members had visited widely in other school systems to get ideas about the range of innovative practices possible. As noted, the self-study reports included identification of innovative practices the faculties wish to investigate, and it was hoped to have extensive visitation to schools that had found effective ways of dealing with the same needs as determined in the Roanoke self-study.

As another illustration of Step 2, the University City (Missouri) Schools initiated in 1963–1964 its "Comprehensive Project for the Improvement of Learning" by faculty identification of curriculum needs followed by study of innovations. Traveling teams of sixty persons studied new programs in various parts of the United States: flexible scheduling, team teaching, nongraded schools, Project English and Composition centers, elementary programs, social studies projects, and reading centers.[15]

Step 3: Controlled evaluation of innovations. Our own observation of the process of curriculum improvement in many school systems indicates that Step 3 is rarely present in even well-organized efforts toward improvement. In fact, we would apply the criticism to most curriculum innovations of recent years. Miles' review of innovations made precisely this point ("Educational innovations are almost *never* evaluated on a systematic basis," p. 657) and he suggested as reasons the following: (1) the lack of enough clear criteria of educational effectiveness; (2) the expense of adequate evaluation; (3) the lack of "controlled situations and measurable procedures, maintained for a significant period of time, and careful measurement of effects"; (4) the possible fear of experimenters that systematic evaluation might prove them wrong; and (5) "the imperatives of organization survival"—that is, the resistance of a vested interest.[16]

The absence of evaluation seems the chief reason why many curriculum innovations fail to achieve the aims of their sponsors. Frequently the innovation does become stabilized, but there is little confidence in its results because they are not really known. And, especially common, the innovation never takes hold or is eliminated even if it does because there is no evidence of its efficacy to support diffusion and encourage acceptance. Hence we would place great emphasis on the importance of building evaluation plans into every new curriculum plan or innovation.

Step 4: The diffusion of innovations. The prime objective of the system-wide improvement program is, of course, as widespread a diffusion of desirable changes as possible. The hope is that practices found good in one classroom and school can be a means of improvement in other classrooms and schools. As controlled evaluative techniques are used, the possibility of wide extension of good practices increases. As a matter of fact, curriculum planning activities at wider levels than that of the local school system, that is, at the state and national levels, have the same central objective.

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[15] Glenys G. Unruh, "A Case Study of Curriculum Development in the School District of University City, Missouri, 1955–1964." Mimeographed.

[16] Miles, *op. cit.*, pp. 657–659.

One major difficulty in education has been the lack of a deliberate theory of the process of curriculum change. We believe that the comprehensive self-study, improvement program offers great possibilities for further curriculum improvement in the United States. We believe it is supported by such research as is available on the process of diffusion. We are attracted to the hypotheses advanced in a *Review of Educational Research* chapter by Klohr and Frymier entitled "The Dynamics of Change," as to further study needed in this field:

> First, is there a need in the field of education for some type of dissemination service or agency that would function in a manner comparable to the county agent in agriculture to help teachers and administrators relate the best research available to the local school situation? Could such an agency both strengthen and broaden the communication bridge between researchers and practitioners to the extent that curriculum would be affected in any appreciable way? . . .
>
> Second, should these persons in leadership positions work directly to establish policies and structures within their own school districts which regularly engage teachers, parents, and administrators in efforts that cut across organizational and grade level lines in order to improve instruction through research at the local level?[17]

Our discussion of these four steps in the comprehensive approach to school improvement should not be interpreted as meaning that only one step is taken at a time in an ongoing, continuous program of curriculum planning and improvement. A school system might well initiate a program with Step 1 (self-study), and then move as rapidly as possible through the other steps with regard to each need. Thus after the first year or two it might have moved rapidly enough to be spreading some innovative practices, evaluating others on a pilot basis, still investigating innovations to be introduced to meet other needs, and even re-evaluating some portions of the program to determine additional needs. Thus in a continuing program of curriculum planning and improvement, each of our four steps might be operating simultaneously in different phases or units of the school system. To illustrate this point, the following excerpts from a report of a case study of curriculum development in the University City (Missouri) schools, 1955–1964, indicate a sampling of activities under way there in one year, 1963–1964:

> *Step 1 illustration.* Local summer curriculum projects are being planned to improve the teaching of English at the secondary levels, to create ma-

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[17] Paul R. Klohr and Jack R. Frymier, "Curriculum Development: Dynamics of Change," *Review of Educational Research,* 33:317 (June, 1963).

> terials and plan new methods for kindergarten, for the teaching of reading, for slow learners, and for team-teaching projects.
>
> *Step 2 illustration.* Following the identification of high priority needs for the Comprehensive Project, staff groups organized to survey means of revising and upgrading the curriculum in several areas. Sixty persons organized into traveling teams studied new programs across the country. . . .
>
> *Step 3 illustration.* Team teaching was organized at both junior high schools in the English–social studies block program, and at the Senior High School a team-teaching project was in preparation in eleventh-grade American history and literature in addition to the humanities team. . . . Philip Dubois of Washington University, consultant on evaluation and research design, and Judson T. Shaplin of Washington University, consultant on team teaching and job analysis, were continuing consultants this year.
>
> *Step 4 illustration.* The "new" mathematics was permeating the elementary and junior high curriculum. Primary teachers were learning Cuisenaire methods, several intermediate teachers continued to experiment with Madison Project materials, and nearly every elementary teacher was learning in in-service courses how to enable pupils to perceive patterns, understand concepts, make discoveries, and use the language of mathematics.[18]

We turn attention now to some of the organizations used in systemwide efforts toward curriculum improvement, including but not limited to such comprehensive approaches as those just described.

Use of Coordinating Councils

Perhaps the most popular device for the organization of curriculum planning in school systems has been the coordinating council or committee. In this type of organization each school is usually represented in some type of curriculum planning group. Such organizations became quite common in the 1950's as school leaders recognized the need to decentralize curriculum responsibility and yet to maintain a clear coordination of curriculum planning. Generally the curriculum council or councils exchange information among schools, recommend policies to the local units where uniformity is desired, and prepare, for the school administration, recommendations bearing on instructional problems. In school systems having some twenty-five or fewer units (individual schools), the organization of such a council is relatively simple. One elected representative from each unit plus one or more representatives of the central administrative or supervisory group make a council that is small enough for effective action. In larger systems councils may be organized for different levels, but this makes difficult planning for the total scope of the curriculum. Another plan is to maintain a large representative body for general reporting and reviewing of the problems and policies, with a smaller steering committee responsible for much detailed planning. Still another possibility in very large systems is a district organization, with each district having its own planning council as described with regard to the Dade County Schools (see pages 428–429).

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[18] Unruh, *op. cit.*

Publication of the coordinating council's deliberations is a useful communication device. Meetings are usually sufficiently extended to permit full discussions. Through the employment of substitutes or through other means many school systems have meetings of a half day or more in length.

Plans for Vertical Curriculum Planning for the System

Various types of organization to ensure continuity from the earliest to the latest year of the public school experience are utilized. In recent years there has been a resurgence of interest in the traditional pattern of committees organized on departmental lines. When this pattern is followed, committees on social studies, kindergarten–grade 12, fine arts, kindergarten–grade 12, and so forth, are common. Although the need for continuity in the various curriculum areas certainly requires elementary and secondary school representatives to plan together, the subject area basis of organization sometimes results in inconsistencies and confusion. Several committees are apt to present recommendations for time, budget, personnel, and materials which become highly competitive. Thus when a vertical organization by subject areas is employed, it is essential that there be frequent cross-communication between the various groups and also that some agency or agencies have coordinating functions.

A second type of vertical organization for curriculum planning is one around geographic areas within the large school system. This pattern of organization is illustrated by the one used in the Dade County (Florida) schools beginning in 1953 (Figure 15). Under this plan each school has its own curriculum council, which is represented on an area curriculum council, which in turn is represented on the county-wide curriculum council. The organization of the area curriculum council in Dade County was described as follows in a 1963 publication of this very large school district:

> Area curriculum councils shall be organized around one senior high school and include the junior high and elementary schools which channel students to the senior high school. In those situations where a single elementary school sends students to more than one junior high school, area membership shall be determined on the basis of the junior high schools which enroll the majority of the students from the elementary school. In the event that the majority is a slight one, it may be necessary to send a non-voting representative to other area curriculum councils in order to insure coordination and communication. This shall also be true

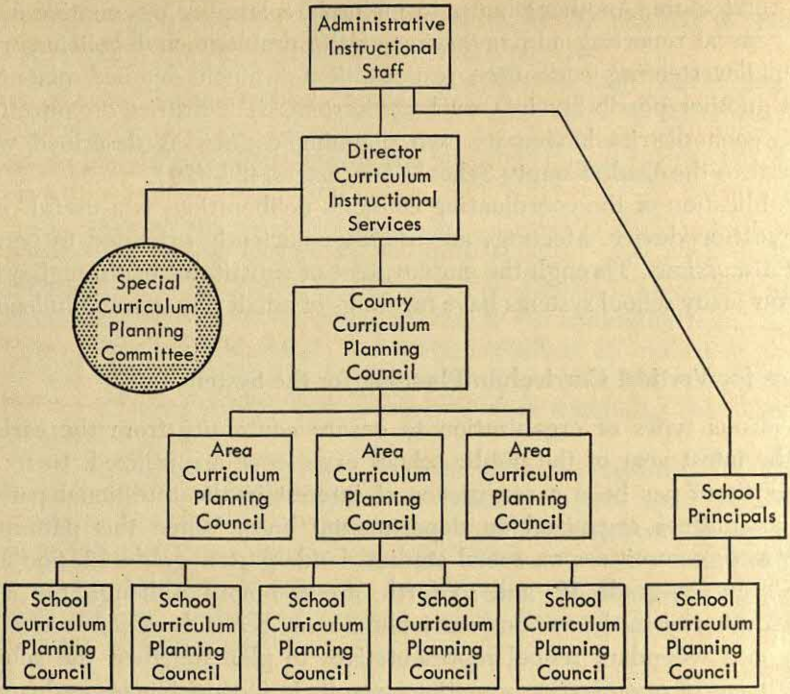
Administrative Instructional Staff
Director Curriculum Instructional Services
Special Curriculum Planning Committee
County Curriculum Planning Council
Area Curriculum Planning Council
Area Curriculum Planning Council
Area Curriculum Planning Council
School Principals
School Curriculum Planning Council
School Curriculum Planning Council
School Curriculum Planning Council
School Curriculum Planning Council
School Curriculum Planning Council
School Curriculum Planning Council

Figure 15: Organization Chart for Curriclum Improvement, Dade County (Florida) Schools

Source: (Dade County Public Schools, *Curriculum Improvement in the Dade County Public Schools,* Miami: The Schools 1963.)

of the junior-senior high school relationship. There is one exception to this rule: the Special Education Department shall be considered as an area within itself.[19]

The duties of the Dade County area curriculum councils indicate the nature of the vertical curriculum planning they facilitate:

1. To develop a coordinated vertical (grades 1–12) curriculum
2. To develop a coordinated instructional program which promotes the smoother transition of pupils from school to school and from one grade level to the next grade level
3. To plan area curriculum improvement projects
4. To recommend to the County Curriculum Council, programs, research studies, curriculum guides, and problems of county-wide importance
5. To review reports of curriculum improvement projects from individual schools

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[19] Dade County Public Schools, *Curriculum Improvement in the Dade County Public Schools* (Miami, Fla.: The Schools, 1963), p. 303.

6. To determine which individual school reports are of county-wide importance and to bring these reports to the attention of the County Curriculum Council
7. To inform the County Curriculum Council about area projects undertaken for study
8. To analyze the strengths and weaknesses of the English and mathematics areas through a study of standardized test results and to make plans for improvement
9. To plan and schedule at least one after-school meeting per semester between teachers in feeder schools for the purpose of improving coordination between schools in a particular subject area
10. To plan effective procedures for introducing new curriculum guides or courses of study
11. To serve as a communications organization concerning special events such as science fairs, industrial arts exhibits, social studies exhibits, and "know your schools" programs
12. To cooperate with the P.T.A. representatives in identifying and planning for improvement in areas where parents are in a position to make constructive contributions, such as interpreting the work of the area curriculum councils to the general public[20]

Still a third type of vertical curriculum planning has already been illustrated by the Roanoke School Improvement Program. A curriculum study program of a somewhat different nature but also utilizing the vertical type of committee organization was employed in a Prince Georges County (Maryland) curriculum study. This program was led by a curriculum study committee composed of 42 laymen, representing 21 county organizations; 30 laymen, members-at-large; 12 teachers representing elementary and secondary schools; 12 principals representing elementary and secondary schools; and 12 supervisors, for a total of 108 members. The total committee was divided into 6 subcommittees functioning as groups during the period of the study, with each composed of 12 laymen, 2 teachers (1 elementary; 1 secondary), 2 principals (1 elementary; 1 secondary), and 2 supervisors (1 elementary; 1 secondary). A policy approved by the Prince Georges County Board of Education set up the following "anticipated outcomes" for the curriculum study:

> Build an understanding of curriculum: what it is, how it is developed, etc.
>
> Inform the public on education in Maryland and particularly in Prince Georges County.
>
> Disseminate facts and information concerning our schools.
>
> Set up procedures for working with interested citizens on school matters.
>
> Establish a good working relationship with organized groups in our county.

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[20] *Ibid.*, p. 304.

Improve communication with the general public through these groups.
Analyze and evaluate public opinion.[21]

We ourselves do not believe that any one pattern of organization is necessarily superior in all school systems. Our observation is that whatever makes for most effective communication and coordination in the local situation is the best for that situation. This criterion must be applied rigorously, and as gaps in communication and coordination are found, remedial steps are needed to effect a better organization.

Lay Advisory Councils

Various advisory councils of lay members, sometimes with staff and pupil representation, are frequently used in modern school systems. At least three patterns of organization are evident. First, a council of laymen may serve the primary function of advising a staff steering committee or the administration of the school system. Second, there may be one advisory council on administrative matters, another on curriculum affairs, and still others on special problems as needs arise for such groups. Third, in some situations an elaborate network of lay advisory councils has been set up, with one council for each of the major subject areas and perhaps still additional ones for other foci of interest within the school system. The representation on the advisory council, whatever the pattern, is usually chosen to provide a cross section of opinion of all those concerned with the schools. Thus in addition to administration, staff, and parent or pupil representatives, such groups as parent associations, churches, labor, business, industry, women's organization and civic societies may be included.

The real scope of the lay advisory committee varies from community to community. In some systems these councils have been used most effectively to increase public support of the schools and to give the public a more clear-cut voice in the determination of school policies. Thus in the San Diego city schools the use of lay advice has been of long standing:

> It has been the policy of this district for at least the last ten years to invite parents and other citizens of our community to become members of the Instructional Council and members of each of our major curriculum committees. As members of these committees the citizens play several roles. They are asked to indicate their evaluation of the existing programs, to help in the recognition of areas requiring increased emphasis, and

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[21] The Board of Education of Prince Georges County, Maryland, *The Curriculum in the Prince George's County Public Schools: A Graphic Presentation* (Upper Marlboro, Md.: The Board, 1960), p. 89.

[to predict] the probable reaction and response of the community to new programs.[22]

Individual Assignments

Sooner or later in effective planning the occasion arises for a particular job to be done by a qualified individual. Although many such tasks are performed by committee members as extracurricular activities, efficient organization, especially at the system-wide level, usually provides for released time, special employment, or makes other arrangements for their performance. The types of assignments frequently accomplished on such a basis include the following:

1. Writing resource units on the basis of group plans, suggestions, and materials
2. Preparing, administering, and summarizing various kinds of instruments for evaluative purposes
3. Interviewing pupils, parents, laymen, and teachers for information to be used in curriculum planning
4. Making investigations of community and other resources to be used on an expanded scale in the school system
5. Writing tentative drafts of publications for review by appropriate committees
6. Carrying on specific fact-finding studies and surveys as bases for curriculum planning

Summer Task Forces

The once "free" (both in time and in pay) summer of teachers is becoming increasingly popular as the time to carry on curriculum planning activities. Thus the Roanoke self-study program described earlier led in 1963–1964 to the organization of some kind of task force of a small number of teachers in almost every school to prepare during the summer the plans and materials needed for improvement efforts to be made in the 1964–1965 school year. Similarly, most improvement programs come to a point at which needed assignments such as those just listed cannot be done during the school year without marked sacrifice of the instructional program.

In fact, we believe that no single action could do more to improve the general quality of curriculum planning in public school systems than the year-round employment of teachers. In a report of the 1963 ASCD Conference on Curriculum Content this argument was advanced in reference to the problem of keeping curriculum content up to date:

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[22] George V. Hall, "Curriculum Development in the San Diego City Schools," *Curriculum Digest*, 20:6 (April, 1960).

Although special institutes may help some teachers and programs, a more permanent provision for teachers' in-service study is essential. A changing curriculum content may be much better assured by a twelve-months' contract for teachers and by other measures to make teaching a full-time job which includes study on the job to do it better. John Sternig supported and illustrated this "if" quite effectively at the conference:

"Our teachers are on year-round contracts. They have five weeks in the summer which they devote to in-service programs such as this. When we went over to the new mathematics program we began with our total staff. In-service work went on for two solid years including two full summer sessions and all through the year. We trained our teachers with the help of the specialists. It is not until this fall that the new program is going into effect in every single classroom."[23]

Other Types of Organization

One of the most widely used organizations for curriculum planning is the workshop or conference, especially the one typically organized at the beginning of the school year as a preschool conference or workshop. Since the primary purpose of such workshops and conferences is generally in-service education of school personnel, we are not giving further attention here to their development. Also, the review of the year's progress which comes in postschool conferences is frequently a step toward curriculum planning. Furthermore, the kind of work done in many preschool conferences where plans for the year are reviewed, materials are examined, and teachers have opportunities to work together in grade-level, departmental, and school groups, is quite closely related to the patterns of organization already discussed in this chapter.

As to general faculty meetings involving over some hundred persons, we have rarely seen them provide opportunity for the give-and-take essential to curriculum planning. They do provide opportunities for the explanation of plans made in smaller groups, presentation of points of view, and so on. The increasing practice of breaking up large meetings into small groups for discussion and reaction may serve a very useful purpose in connection with most types of organization for curriculum study and planning.

Inter-system Organization

A promising pattern of cooperative activity is the joint participation by representatives of school systems within a particular area and those from institutions of higher education. In a number of suburban areas where individual school districts are relatively small, significant work in curriculum coordination is done by councils or committees representing the several school districts concerned. An outstanding example of this pattern of cooperative activity is the Educational Research Council of Greater Cleveland. This council is a nonprofit, nongovernmental, cooperative research and development center, supported by philanthropy, participating school systems, and royalties from its publications. The organization is described in part in the following excerpt from a council publication, *A New Force in Education*:

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[23] William M. Alexander, *Changing Curriculum Content* (Washington, D.C.: Association for Supervision and Curriculum Development, 1964), p. 17. Copyright © 1964 by the Association for Supervision and Curriculum Development.

> The Council consists of four principal parts: a board of trustees; a corps of leading scholars in many disciplines; a central professional staff of about 30 research and subject matter specialists and writers headed by Dr. Baird; and the administrators, 8,000 teachers, and 250,000 pupils of 26 participating school systems. The trustees are Cleveland area leaders in commerce and industry who are interested in improving education. They serve in a fund-raising and management advisory role; they take no part in educational policy-making, administration, or operation. The superintendents of the participating systems establish priorities for Council projects and generally collaborate in their smooth and effective operation.
>
> The Council is unique in that it includes public, parochial, and private schools, rich, middle-class, and poor, urban, suburban, and rural, all cooperating in a common effort to develop quality programs. It thus provides a laboratory situation—a microcosm—in which work that is valid can be done.[24]

In 1965 the council had projects in various stages of development in mathematics, social studies, reading, staff utilization, data processing, teacher in-service education, testing and evaluation, and other areas. The range of curriculum problems which could be dealt with cooperatively by such organizations as this one is exceedingly great, and it is definitely to be hoped that more and more community educational organizations and institutions will see the desirability of effecting such patterns of work.

A Desirable Organization for the System

Features of desirable organization of curriculum planning at the system level have been indicated throughout this section. Some criteria for planning and evaluating the organization are summarized as follows:

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[24] Educational Research Council of Greater Cleveland, *A New Force in Education* (Cleveland: The Council, n.d.), p. 2. We were informed by a letter from the council, October 23, 1964, that the council's central professional staff then included about 45 research and subject matter specialists and writers, and that there were then 29 participating school systems.

1. Individual school units should be encouraged and aided by a central coordinating organization to develop plans appropriate to their pupils and communities.
2. Curriculum proposals made by special groups representing different subjects, geographical areas, or other special interests in the system should be channeled through the central coordinating agency and worked out in pilot situations on experimental bases so far as possible.
3. Centrally planned policy should involve participation of all concerned and should be subject to review and modification by individual school units in accordance with the first criterion above.
4. Once problems are identified and general policies established cooperatively, the most efficient means possible of implementing plans and solving problems should be utilized.
5. The plan of organization should be continuously evaluated and modified as needs arise.

STATE AND LOCAL RELATIONSHIPS IN CURRICULUM PLANNING

With the increasing tendency toward centralization in education as in other social functions, the role of the state education agencies becomes increasingly important in curriculum development. Indeed the federal Education Act of 1965 provided for grants to strengthen state departments of education. Although we have adhered in this book to the principle of local initiative in the curriculum field, we do hold that the state agency should give strong leadership and support to local curriculum planning activities. For example, a very interesting bulletin from a state department of education, which many have considered to have exerted strong centralized control gives detailed suggestions for "planning locally for continuous curriculum development," makes specific suggestions on the development of local curriculum materials, and states that "state-wide curriculum requires local adaptation and implementation by the local people under leadership of the administrators and the board of education."[25] We ourselves would prefer that the statement emphasize the point that the local curriculum requires aid and stimulation because we believe in another principle stated in this same publication: "People who help plan will help put plans to use." However, we believe that curriculum workers would find great help in their curriculum planning activities from the publications and services of such a large state department of education as that in New York.

Our observation of the relationships of the state education agencies and local schools suggest the following as criteria for evaluating these relationships:

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[25] New York State Education Department, *Planning Locally for Continuous Curriculum Development* (Albany: The Department, 1961), p. 1.

1. The state education agency should organize and assist some suitable, representative group to serve as a curriculum evaluation commission.[26]
2. Local districts should be aided in maintaining continuing organizations for curriculum improvement, each such organization being planned locally to fit the particular situation.
3. Each state program directed toward improving instruction in a particular division or divisions of the school system should provide means of facilitating local study, innovation, and evaluation.
4. State educational support should include allocations of funds for curriculum research, experimentation, innovation, and evaluation.
5. The state department of education should periodically make systematic evaluation of its services to school districts, and modify its program in the light of evidence received.

Factors Which Facilitate Cooperative Curriculum Planning

In ending this description of ways of organizing cooperative curriculum planning, it seems appropriate to identify the factors or conditions which are seen to make for effective planning. Our own observations indicate that the following factors are most critical:

1. *Teachers who are imaginative, open-minded, energetic, self-critical:* Teachers, like the pupils they teach, must want to learn if participation is to be real. A corps of such teachers is probably the best assurance of an improving curriculum.

2. *A pattern of administrative procedure and a quality of administrative leadership which encourage individual initiative:* Teachers and others cannot participate effectively in curriculum improvement programs unless they have faith that the results of their work will be accepted and implemented by administrative officials. The relationship of faculty acceptance and liking of the leader and the character of faculty morale is very positive.

3. *Clearly defined groups and procedures for planning curriculum improvement:* Without such groups and procedures participation may be aimless and wasted. Furthermore, the groups and procedures need to be tailor-made for the situation.

4. *Facilities and time for experimentation, planning, and study:* A reasonable teaching load, adequate facilities in materials and working quarters, and time for cooperative planning are essential. As emphasized earlier, summer employment is highly desirable.

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[26] See William M. Alexander, "Assessing Curriculum Proposals" in A. Harry Passow (ed.), *Curriculum Crossroads* (New York: Bureau of Publications, Teachers College, Columbia University, 1962), p. 21, for development of this idea. Also see Henry M. Brickell, *Organizing New York State for Educational Change* (Albany: State Education Department, 1961) for a comprehensive proposal of an organization for New York State.

5. *Provision of adequate consultative services of a competent and permissive type:* Such services both from within and without the system are essential in helping individuals overcome the limitations of their own experience. The relationship of the consultant and the faculty must also be one of mutual liking and respect to secure optimum results.

6. *Full opportunity for interchange of experience:* Arrangements for the exchange of personnel, for interschool councils and bulletins, and for reciprocal visits are helpful. Even in the individual school, interclassroom visitation is highly desirable.

7. *Recognition of successful efforts:* The incentive of salary and other advancement, scholarships, opportunities for writing and speaking, leaves of absence, and expenses for professional meetings may greatly encourage continued participation. We are inclined to believe that there is no adequate substitute for the pay incentive to stimulate a professional career.

FOR FURTHER STUDY

CASWELL, HOLLIS L., AND ASSOCIATES. *Curriculum Improvement in Public School Systems.* New York: Bureau of Publications, Teachers College, Columbia University, 1950.

Includes reports of curriculum improvement programs as of 1950 in Battle Creek (Michigan), Denver (Colorado), Glencoe (Illinois), Kingsport (Tennessee), Minneapolis, Philadelphia, and Alameda (California).

DALTON, ELIZABETH L., AND WILLIAM M. ALEXANDER. "Improving the Junior High Curriculum: A Case Study," *High School Journal,* 44:226–231 (April, 1961).

Report of the Chattanooga Junior High School Study from which excerpts have been drawn in this chapter.

DOLL, RONALD C. *Curriculum Improvement: Decision-Making and Process.* Boston: Allyn and Bacon, Inc., 1964.

Several chapters present problems and principles of curriculum improvement in the school and system; see especially Chapters 8 through 11.

DOLL, RONALD C., A. HARRY PASSOW, AND STEPHEN COREY. *Organizing for Curriculum Improvement.* New York: Bureau of Publications, Teachers College, Columbia University, 1953.

Compares three patterns of organizations for curriculum improvement (centralized, decentralized, and centrally coordinated), and also describes in some detail the West Orange (New Jersey) centrally coordinated one.

MCNALLY, HAROLD J., A. HARRY PASSOW, AND ASSOCIATES. *Improving the Quality of Public School Programs: Approaches to Curriculum Development.* New York: Bureau of Publications, Teachers College, Columbia University, 1960.

Includes reports of curriculum improvement programs in several school systems: Dade County (Florida), Lewis County (New York), Denver, Newton (Massachusetts), Galena Park (Texas), and Bellevue (Washington).

Miles, Matthew B., ed. *Innovation in Education.* New York: Bureau of Publications, Teachers College, Columbia University, 1964.

Most reports and analyses included in this volume deal with the introduction of innovations in schools and school systems; see especially Chapters 2, 9, 23, and 24.

National Education Association, Center for the Study of Instruction. *From Bookshelves to Action: A Guide to Using the Recommendations of the NEA Project on Instruction.* Washington, D.C.: The Association, 1964.

This study guide, based on publications of the NEA Project on Instruction, may serve as a starting point for evaluation and/or organization of a local plan for curriculum improvement.

National Education Association, Project on Instruction. *Schools for the Sixties.* Washington, D.C.: The National Association, 1963.

Several of the 33 recommendations presented by the Project relate to curriculum planning in school systems and individual schools. See especially Recommendations 1, 3, 6, 15, 16, 17, 20, and 28.

Oliver, Albert I. *Curriculum Improvement: A Guide to Problems, Principles, and Procedures.* New York: Dodd, Mead & Company, 1965.

Includes many "problems" (situations, incidents, excerpts, etc.) of curriculum improvement. See especially Section III, "Curriculum Decision-Making," and Section V, "Focus on Change."

Passow, A. Harry, ed. *Education in Depressed Areas.* New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Part V includes illustrations of various approaches to developing improved programs in depressed areas.

Ragan, William B. *Modern Elementary Curriculum.* Rev. ed. New York: Holt, Rinehart and Winston, Inc., 1960.

Chapter 7 presents specific suggestions regarding the organization of the elementary school faculty for curriculum improvement.

Who Should Plan the Curriculum? Reprint of articles from October, 1961, issue of *Educational Leadership.* Washington, D.C.: Association for Supervision and Curriculum Development, 1961.

See especially the articles by Hass, Dewar, Mitchum, Thatcher, Ovsiew, and Ayars for analyses of various roles in local curriculum planning.

Wiles, Kimball. *The Changing Curriculum of the American High School.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963.

See Chapter 14 for specific suggestions regarding the organization of a high school faculty for curriculum improvement.

CHAPTER 13

The Teacher's Own Planning

Throughout this book we emphasize the point of view that the central person in curriculum planning is the teacher at work. Curriculum planning at other levels is effective only as it is focused on providing aid, support, and, at times, direction to individual teachers. Unless the teacher is an active participant in the planning processes of his school and school system, he generally has difficulty in implementing the plans made there. Furthermore, he may even resist plans in which he was not involved.

The most critical phase of the entire planning process consists of the teacher's own efforts to develop plans for the pupils he teaches. These plans are of a multiplicity of sorts. They include the resource units prepared in conjunction with other teachers as bases for selecting content and learning experiences in various classrooms. They also include plans made cooperatively by the members of teaching teams. Whether made for one classroom and one teacher or for several, the individual teacher's own plans include both long-range and short-term goals, content, and procedures. He must plan, too, for any involvement pupils are to have in the planning process. Especially in developing short-range plans the teacher is concerned with the learning needs and experiences of the individual pupils for whom he has responsibility.

Before turning to these various types of planning activities of the teacher, attention is first given to the teacher's possible objectives for himself as he carries on these sometimes arduous planning activities. We will also note the place of planning in the total range of teaching responsibilities and assess its importance in the teaching-learning process.

THE CURRICULUM PLANNING PROCESS AND THE TEACHER

The most obvious but perhaps the least important reason for teacher planning is found in the teacher's desire to be prepared for his classes. Certainly the evidence is very clear that the effectiveness of teaching is closely related to the preparation the teacher makes for his work. Pupils readily detect whether or not their teachers are prepared and their evaluations reflect a generally critical attitude on this score. The saying that "the best teacher is the best prepared teacher" has considerable foundation. We would be very loath, however, to rest the case for curriculum planning on the basis of classroom insurance against poor teaching!

For our part, the fundamental values which accrue to the teacher participant in curriculum planning are those of changes in knowledge, insights, and self-perception. Today's information revolution demands a constant refreshing of the teacher's information stores. Whatever his level and area of work, he can teach more effectively as he learns more about the disciplines from which he draws in teaching. His planning must inevitably take him into the sources of curriculum content. Even the teacher of primary-grade children is constantly challenged to be as well informed about current happenings in the community and the world as are some of the television viewers in the class. At higher levels the teacher needs up-to-date information coming from the continuing extension of research and knowledge in the basic disciplines.

Along with developments in subject matter the informed teacher must also have learned about new findings in human development and learning. From his readings and studies in the fields of education, psychology, and related disciplines, he plans with greater insight into the processes of his pupils' own development and learning. As the teacher's planning involves studies of the community, pupils' backgrounds and aspirations, and their interpersonal relationships, his judgment improves as to what content and what learning experiences are appropriate.

We find most persuasive the reasoning of the perceptual psychologists as to the *sine qua non* of teacher involvement in processes that have built-in promises of teacher growth. As McClendon noted in an article on faculty self-study and planning activities, "before teachers can change their methods of teaching and how they feel about the types of problems which are important to them they must change their attitudes about themselves,"[1] adding,

> It is now being realized more forcefully that changes in traditional methods of teaching, where the subject matter is the focus of attention and children function in a passive role, will be accomplished only with changes in these teachers using such methods. Mere acquisition of knowledge, however, is insufficient for behavioral change to occur. The major task is to help teachers change their behavior after having acquired new information. Such behavioral change occurs only as the person's meanings or perceptions change.[2]

Thus the real goal of the teacher's study and planning for his pupils' curriculum is to become himself a more truly adequate person possessing the characteristics cited by a leading perceptual psychologist, Arthur

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[1] Paul E. McClendon, "Teacher Perception and Working Climate," *Educational Leadership*, 20:105 (November, 1962).

[2] *Ibid.*

W. Combs, as underlying the behavior of such persons: "(a) a positive view of self, (b) identification with others, (c) openness to experience and acceptance, and (d) a rich and available perceptual field."[3] Teachers whose planning and preparation in general are of such depth that they attain these characteristics are able, we believe, to teach as effectively as described in the following passage from the 1962 Yearbook of the Association for Supervision and Curriculum Development in a section on "Motivation and the Growth of Self":

> The teacher who brings the self of students into his classroom must be a facilitating person. He must see his role as that of a helping person rather than a driver, a pusher. He must be willing to search for ways in which students may find themselves experiencing success. He must create situations in which students can find themselves needed and wanted by others. He must develop situations in which he can show each child that to his teacher and to his fellow students he matters, that he is accepted as he is. As individuals within the group begin to see themselves in positive ways and to share in group tasks, they, too, become facilitating. Facilitating, helping people tend to produce helping people. In a classroom where the climate is one of acceptance and warmth, students may tend to help each other to grow—to become a process, i.e., a person in movement from old "me" to new "me."[4]

PLANNING AS A PHASE OF TEACHING

Varied as are the patterns of teaching activities of some one and a half million teachers in the United States, all patterns reported (and, one hopes, the pattern of each individual teacher) include planning and preparation as a phase of the teacher's job. Unfortunately, surveys of how elementary and secondary school teachers spend their working time indicate that a relatively small proportion is given to the planning phase. Figures 16A and 16B show the result of a questionnaire study in the spring of 1961 regarding the time devoted by teachers to various types of teaching duties. The average distribution of the elementary school teacher's week (Figure 16A) included only 2 hours and 30 minutes of the workweek of 48 hours and 30 minutes, or slightly over 5 percent, devoted to "personal preparation." If one adds in the hours for "preparing materials," "individual help," "parent contacts," and "official meetings" on the assumption that these activities were parts of or aids to

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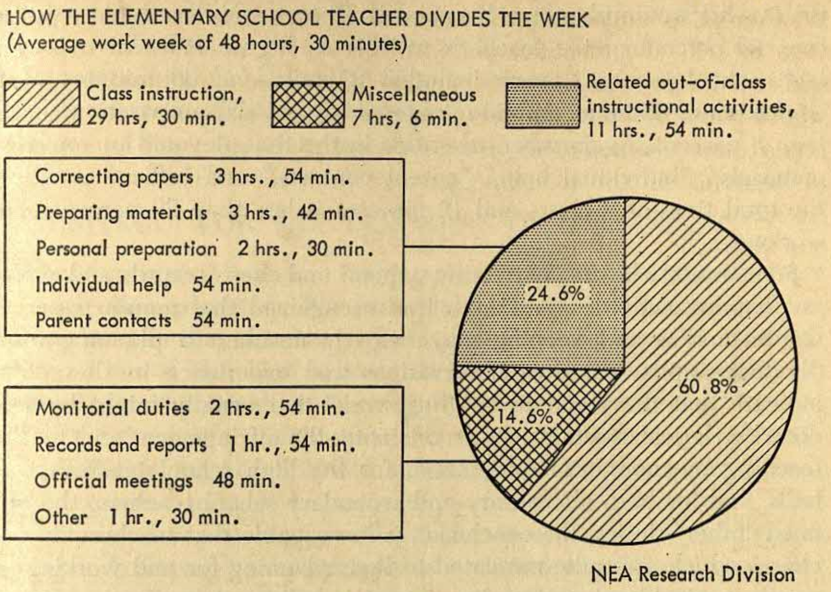
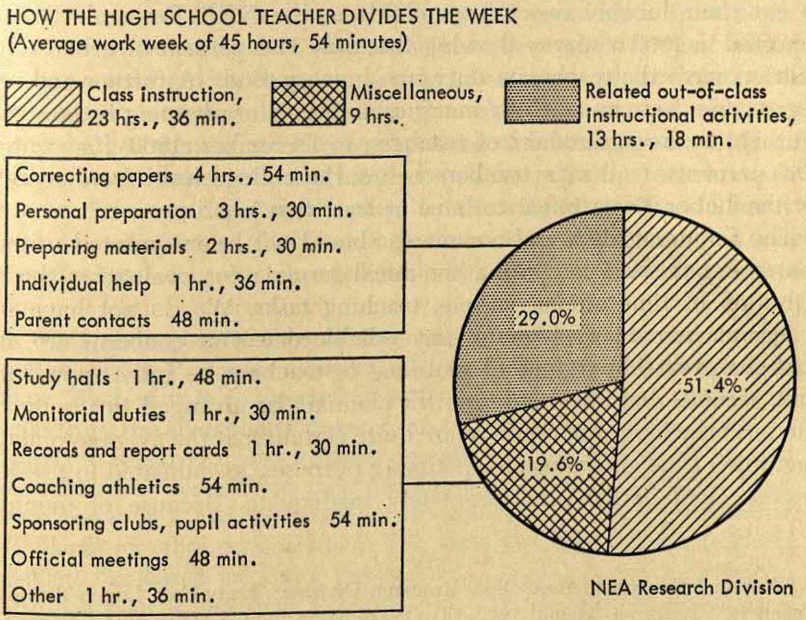
[3] Arthur W. Combs, "A Perceptual View of the Adequate Personality," in *Perceiving, Behaving, Becoming—A New Focus for Education*, 1962 Yearbook, Association for Supervision and Curriculum Development (Washington, D.C.: The Association, 1962), p. 51. Copyright © 1962 by the Association for Supervision and Curriculum Development. Also see Combs' article, "The Personal Approach to Good Teaching," *Educational Leadership*, 21:369–377, 399 (March, 1964).

[4] *Perceiving, Behaving, Becoming*, p. 95.



NEA Research Division

Figure 16A



NEA Research Division

Figure 16B

Figure 16: How Teachers Spend Their Workweek

the teacher's own planning, the total is 8 hours and 48 minutes, still less than 20 percent of the teacher's workweek. Figure 16B shows that the high school teacher's week included 3 hours and 30 minutes of the workweek of 45 hours and 54 minutes, for "personal preparation," or less than 8 percent. Again when one adds in the time devoted to "preparing materials," "individual help," "parent contacts," and "official meetings," the total time of 9 hours and 12 minutes is less than 20 percent of the workweek.

Some might classify "correcting papers" and even "records and reports" as planning activities. Although it is recognized that ample paper correction and record keeping may help the teacher in planning for individual pupils, our own observations and experience in these duties indicate that they tend to be "busywork" that usually might be better done by clerical assistants. When one notes the infringement on a teacher's teaching by monitorial duties and, for the high school teachers, study halls, and for both elementary and secondary school teachers, the undefined "other" duties, the conclusion is inescapable that teachers do many chores which are quite unrelated to their planning for and working with pupils in teaching-learning situations. We believe that effective planning necessitates opportunities for teachers to work apart from pupils both in the classroom and in other situations, such as lunchrooms and study halls, where the teacher serves primarily a monitorial or policing function. Elementary school teachers, for example, typically are unable even to eat their lunches away from children; the NEA Research Division reported in 1962 a survey showing that only 11.9 percent of urban school districts gave the teachers a duty-free lunch period.[5] A further and most regrettable drain on teachers' energies and time for planning is the second job held by large numbers of teachers; in December, 1960, for example, 23.5 percent of all men teachers below the college level were reported by the Labor Department to have at least two jobs.[6]

The foregoing data and comments should not be interpreted to mean that there is some magic mathematical formula for evaluating the distribution of time among various teaching tasks. We do not have such a formula nor do we know of any reliable one. Our concerns are, first, that the great importance of planning in teaching be fully appreciated, and, second, that adequate time for planning be arranged in the light of the total teaching program. We are quite certain that the average practices regarding time allocations for planning purposes, as indicated in the NEA survey cited earlier, are completely inadequate. Because of mounting concern among teachers about the time problem, the National Education Association initiated in 1964 a "Time to Teach" Project. This project aimed to determine "what can be done to improve teaching conditions, enhance staff relationships, and enable teachers to make increasingly efficient use of time, materials, and methods in today's classrooms."[7]

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[5] National Education Association, Research Division, "Duty-Free Lunch Periods for Teachers," Research Memo 1962–14 (Washington, D.C.: The Association, April, 1962), p. 1.

[6] "Teachers with Supplementary Jobs," *School Life*, 44:17 (January–February, 1962).

CRITERIA FOR THE TEACHER'S OWN PLANNING

Various types of criteria are employed as guidelines for the teacher's own curriculum planning. For example, many teachers employ some set procedures in their teaching which to them represent a "method" of teaching. Thus if the high school teacher followed the once-popular Morrisonian unit method of teaching his planning would be done in terms of the classic steps in this particular method: exploration, presentation, assimilation, organization, and recitation. Or if the elementary school teacher organized most of his instruction around an "activity unit," the chief criterion for planning would be the involvement of children in selecting and carrying on various types of activities, usually of a manipulative variety, somewhat related to the central interest, concept, or theme constituting the unifying element. We cannot accept a teaching "method" as a valid criterion for planning because there is so little evidence of the existence of truly discrete and consistent methods of teaching. In the first place, our observations indicate that teachers in general, including the most effective ones, change their procedures from time to time as they encounter new situations. Indeed, we believe that effective planning would aid teachers in making adjustments of their procedures as occasions necessitate change. In the second place, we very much doubt whether there is any standard pattern of teaching behavior justifying a particular label on a teaching method for which all teachers using the procedure could justifiably plan. In this respect we are inclined to accept the criticisms of Wallen and Travers regarding research on teaching method as being equally applicable to plans for particular methods:

> Worthwhile research on teaching methods cannot be carried out opportunistically. Past research bears little resemblance to what the scientist does. Much of it is an attempt to justify new practices, and much of it represents the ill-designed research of the graduate student. Most attempts to design teaching methods provide only the flimsiest foundation for subsequent research on their effectiveness. These attempts have not been based on a comprehensive set of principles of learning but rather are based on other considerations. Too often the designer of a teaching method has based an entire method on a single appealing principle. Such behavior is analogous to that of the engineer who, in designing a machine, attended only to the laws of friction and neglected all other

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[7] Malcolm M. Provus, "Time to Teach," *NEA Journal*, 53:18 (May, 1964).

> established laws of physics. The faults of design make it futile to conduct studies comparing them with other teaching methods which are just as poorly designed. Such research merely reveals that all the methods compared are approximately equal in their ineffectiveness.[8]

Another set of criteria sometimes employed has principally to do with the selection of content. Thus the history teacher who is planning for a period of instruction having to do with the industrialization of the United States might set up certain guidelines such as the inclusive years to be considered, the extent to which economics and other social sciences would be stressed, and the degree of objectivity to be used in treating the work of selected industrialists. As we see it, the use of such principles is essential in the teacher's planning. There needs to be attention to the limitations and the focus of the subject matter selected from the discipline or disciplines involved. Such guidelines would not be sufficient, however, in the formulation of comprehensive plans for the teacher's work inasmuch as these criteria used alone would merely govern the teacher's presentation of material or his assignment of material for pupils' study. Attention is also essential to such matters as the development of interest in the subject matter, the collection and use of various sources of information, and the relation of the subject matter to the past experiences, present interests, and future aspirations of pupils.

Still a third set of criteria for the teacher's own planning might be what is known about the characteristics of effective teachers and teaching. Certainly teachers can profit very much from knowledge of research findings about these matters.[9] There has been a growing body of research dealing with the characteristics of effective teachers, and teachers may well spend time in reflecting upon their own in contrast to what is known about desirable personality characteristics. Research has also sought to determine the characteristics of effective teaching behavior. As yet the research data do not seem adequate to yield specific criteria to guide the teacher's steps in the development of long-range and short-term plans for particular pupils..

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[8] Norman E. Wallen and Robert M. W. Travers, "Analysis and Investigation of Teaching Methods," in N. L. Gage (ed.), *Handbook of Research on Teaching* (Chicago: Rand McNally & Company, 1963), pp. 493–494.

[9] See such important compilations as J. W. Getzels and P. W. Jackson, "The Teacher's Personality and Characteristics," in Gage, *op. cit.* (also other pertinent chapters) and Arno A. Bellack (ed.), *Theory and Research in Teaching* (New York: Bureau of Publications, Teachers College, Columbia University, 1963); and such significant studies as Ned A. Flanders, *Teacher Influence, Pupil Attitudes, and Achievement Studies in Interaction Analysis* (Minneapolis: University of Minnesota Press, 1960); Marie M. Hughes and others, *The Assessment of the Quality of Teaching: A Research Report* (Salt Lake City: University of Utah, 1959); David G. Ryans, *Characteristics of Teachers* (Washington, D.C.: American Council on Education, 1960); and B. Othanel Smith, Milton O. Meux, and others, *A Study of the Logic of Teaching* (Urbana: Bureau of Educational Research, University of Illinois, n.d.).

Finally, we would propose that the really fundamental criteria to guide the teacher's planning should come from accepted principles of learning and from school objectives. We have already discussed fully the use of goals or objectives (Chapter 4) and that of learning principles (Chapter 6) in curriculum planning, and suggest that knowledge of such materials as presented or cited here should be basic to the teacher's planning.

Certainly the teacher is unlikely to begin a year's or a unit's planning by reading several volumes on educational goals and on learning, but we believe that he can profitably think through such pertinent questions as these:

What goals of this school should be sought in this year's work (or this unit of work) for the group I teach? What can I assume as to what has already been accomplished toward these goals for this group? What other teachers, if any, of the same pupils will be working toward the same goals, and how? How can I find out from time to time what progress we are making?

What principles of learning are applicable to this year's work (or this unit of work) for the group I teach? What can I reasonably assume about this group of pupils as to their motivation for these experiences? their self-concepts? their readiness? their learning skills? What types of learning experiences are most likely to secure maximum pupil involvement? What needs for differentiated learning activities are indicated by the known characteristics of these individuals?

These are only illustrative questions of the many that can give guidance in planning for particular situations. Each teacher who attempts to plan for his classes and for individual pupils on the basis of such problems will wish to add others. Perhaps what the teacher needs most of all is a basic philosophy of his tasks which is consistent with what is known about all the possible criteria discussed in this section. In making a set of plans consistent with his philosophy he can then be guided by the appropriate principles he accepts.

PLANNING AS A TEAM MEMBER

A portion of each teacher's time and effort in curriculum planning is devoted to participation in planning for the department or grade level, the school, and the system. We have already dealt with these planning processes in Chapter 12. Two other types of curriculum planning involving more than one teacher directly relate to individual classrooms: plans for team-teaching arrangements, and the preparation of resource units for use by the several teachers involved and perhaps others.

Plans for Teaching Teams

The use of team teaching in the organization for instruction of elementary and secondary schools was discussed in Chapter 10.[10] Since this type of teaching arrangement seems likely to spread—or at least to be more carefully and experimentally tested in the future—some attention seems needed here to the process of planning for the teaching team. The survey made by the National Educational Association's Project on Instruction indicated a clear trend toward increase in the use of team teaching, defined in the survey as "a plan whereby two or more teachers are jointly responsible for the instruction of the same group of pupils." The elementary school principals reporting in this survey indicated that team teaching had been used in 1956 in 5 percent of the districts included, was being used in 15 percent in 1961, and would be used in 30 percent in 1966. A similar trend was also indicated by the secondary school principals, 5 percent of whom reported use of team-teaching arrangements in 1956, 12 percent in 1961, and 31 percent in 1966.[11]

One of the chief arguments usually advanced for team-teaching arrangements is the opportunity for cooperative planning by teachers:

> The teacher will receive more professional and personal stimulation working on a team than working in isolation. There will be better communication among staff members, more motivation for continuous curriculum improvement, more cooperative planning. Because the team places a premium on unusual ability and skill and on exceptional qualities of leadership, it will encourage teachers to grow professionally, and well-qualified teachers are more likely to be attracted to the schools.[12]

However, Dean and Witherspoon, authors of the foregoing "pro" for team teaching, also offer the following "con":

> Not all teachers are qualified by temperament and training to work effectively as members of a team. Enough teachers especially trained in both subject matter and team relationships and enough skilled and gifted team leaders may not be available.[13]

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[10] For more extended discussion of team teaching see David W. Beggs, III (ed.), *Team Teaching, Bold New Venture* (Indianapolis: Unified College Press, Inc., 1964); Medill Blair and Richard G. Woodward, *Team Teaching in Action* (Boston: Houghton Mifflin Company, 1964); and Judson T. Shaplin and Henry Olds, Jr. (eds.), *Team Teaching* (New York: Harper & Row, Publishers, Inc., 1964).

[11] Project on the Instructional Program of the Public Schools, *The Principals Look at the Schools* (Washington, D.C.: National Education Association, 1962), p. 18.

[12] Stuart E. Dean and Clinette F. Witherspoon, "Team Teaching in the Elementary School," *Education Briefs* No. 38 (Washington, D.C.: U.S. Office of Education, January, 1962), p. 10.

[13] *Ibid.*, p. 11.

Furthermore, Robert Anderson, who has given leadership in the Harvard University area to team-teaching projects, stated in 1961 that "a major problem reported by teams (and, we would add, by thousands of other teachers) is finding adequate time for planning and evaluation."[14] Anderson added the following statements:

> Most teams have found themselves quite overwhelmed by the curriculum problems that come to light as they work together. Adequate guidelines to daily operations and scheduling, to techniques of instructing groups of various sizes, and to role performance are not yet available.
>
> Communication within teams and between teams has yet to be perfected, and because of the frequency and intensity of contact, there are many complex problems in human relations.[15]

Despite these difficulties in team-teaching arrangements, we ourselves believe that they can be overcome and that much better planning and teaching will result as individual teachers profit from each other's specialization, experiences, and ideas.

The process of curriculum planning for the team-teaching arrangements has the advantages and limitations of the procedures of other group curriculum planning operations described in earlier chapters. In addition, it has two features which intensify both the difficulties and the potential advantages of team planning. In the first place, the teaching team is concerned with a particular pupil population. These are pupils known to the teachers, and team planning gives each teacher an opportunity to learn more about his pupils through the eyes of other team members. In such planning it is also possible to combine efforts to make better provisions for individual pupils. In the second place, the team's planning involves the very specific element of "who does what." Provisions are made for division of labor, for use of the special competencies of team members, and for assistance where it is needed. It is in these types of arrangement, of course, that any personality conflicts may become acute. Accordingly, most teams would profit greatly by experience and training in group procedure and by the presence of a leader with unusual skill in group decision making.

Preparation of Resource Units

The preparation of resource units is one of the most effective procedures known to serve the purposes of both curriculum planning and in-service education of teachers. One authority in the curriculum field, Hilda Taba, has proposed that cooperative unit development should be basic, perhaps *the* basic step in curriculum development:

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[14] Robert H. Anderson, "Team Teaching," *NEA Journal,* 50:54 (March, 1961).

[15] *Ibid.*

> . . . the development of "pilot units" designed for known groups of students and for tangible circumstances has to be an important part of scientific curriculum development. As these experimental or pilot studies become available, it is then possible to consider on a new basis such problems as an over-all continuity, sequence, and integration of subjects. In this sense, then, curriculum development should be an inductive process, beginning at the grass roots and with natural small units and proceeding into the more general problems of over-all organization.[16]

Although we fully agree that the cooperative work of teachers on resource units can be excellent preparation for teaching, we urge that before resource units are fully developed there be a faculty decision, even if it is merely an acceptance of some curriculum planning group's recommendation, as to the basic curriculum organization (see Chapter 8) to be used. That is, units should be planned within an agreed-upon framework.

The term "unit" has many uses in education, and there is confusion even regarding such extensions as *resource unit.* To systemize the discussion here we start with the *unit of work* as the actual organization of learning experiences related to the unit topic, theme, problem, or other source of unity. That is, the unit of work is what actually happens and is finally developed in the learning situation itself. A resource unit is a compilation of suggested learning experiences and resources typically developed for more than one group of pupils and having possibilities for use by several teachers. Thus the resource unit is a "resource" from which teachers may draw materials to be used in plans for their own classes. A *unit plan* is a particular teacher's outline of the unit of work he hopes to develop with a particular group of pupils. It may or may not be based on a resource unit the teacher has helped to develop. Logically, then, a group of teachers interested in teaching similar areas of content prepare a resource unit together; each teacher selects from the resource unit ideas in developing his own unit plan; and, finally, as many units of work are developed in the classrooms as there are teachers and groups of pupils.

Many different forms and formats are used in the preparation of resource units. In a sense, the teacher's folder of materials collected by himself and others dealing with a particular topic is a resource unit. Some teachers use sets of index cards containing notes about readings, visual aids, content, test items, and other matters as their basic resource in teaching .Usually, however, when several teachers come together to work out a segment of their programs at a particular grade level or in a particular subject area, some written outline of their agreements becomes important. On the basis of her study of over 400 resource units, Hill reported in 1961 that most of the units contained the following basic ingredients in one form or another: "Introduction or overview, objectives for the unit, content (problems, concepts, or subject matter), activities, evaluation materials."[17] A very comprehensive resource unit, the 186-page "Ships, Harbor, and Cargoes" produced for grade 3 in the Long Beach (California) Unified School District, contained these sections:

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[16] Hilda Taba, *Curriculum Development: Theory and Practice* (New York: Harcourt, Brace & World, Inc., 1962), p. 345.

- Introduction (explanation of the use of units of work in the social studies program)
- Use of This Guide (specific suggestions to teachers on how to use the various sections)
- Objectives
  - Anticipated Growth in the Child
  - Generalizations
- Suggested Areas of Experiences
  - Construction and Manipulation
  - Physical Activity
  - Gathering Information
  - Dramatic Play
  - Communication
  - Creative Expression
  - Appreciation
  - Science Experiences (with specific references to related materials)
  - Geographic Experiences (also with references)
- Overview
  - Initiation (suggestions as to arranging the classroom environment)
  - Subsequent Activities (in two columns, experiences and materials)
- Evaluation
  - Oral Evaluation
  - Written Evaluation
- Sources of Information and Materials
  - Educational Field Trips
  - Audio-visual materials
  - Music
  - Literature
- Bibliography
- Appendix (Various specific materials for the teacher, including a glossary of terms)[18]

For another illustration, a series of much briefer resource units for language arts, grades 7–12, in the Dallas (Texas) Independent School District used this outline for each unit:

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[17] Wilhelmina Hill, "Planning for Instruction," in John O. Michaelis (ed.), *Social Studies in Elementary Schools*, 32nd Yearbook of the National Council for the Social Studies (Washington, D.C.: National Education Association, 1962), p. 263.

[18] Division of Instruction, Long Beach Unified School District, *Ships, Harbor, and Cargoes* (Long Beach, Calif.: The Division, 1960). Parenthetical statements supplied.

Overview (general scope and significance of topic)
Suggestions for Introducing and Motivating
General Objectives—Teacher
Specific Objectives—Teacher
Student Objectives
Student Problems and Needs (includes learning experiences)
Culminating Activities and Evaluation
Materials (sections on films, filmstrips, recordings, other resources, teacher references, student references)[19]

We ourselves have no single outline to recommend, but suggest that any resource unit prepared to help teachers other than those who prepare it should answer rather fully the following questions:

1. What is the organizing center of this unit—the topic, problem, or other source of unity? And what is the scope of content included?
2. For what level and subject areas is the unit intended? In what types of teaching-learning situations would it (or has it been) appropriate?
3. What are the desired learnings (concepts, attitudes, skills, etc.) that can be sought in the unit?
4. What learning experiences can be useful in developing the desired learnings (3)?
5. What learning resources can be used in relation to these experiences (4)?
6. What techniques can be used to evaluate pupil progress in the course of this unit and also to evaluate the unit as a whole?

In the actual preparation of the resource unit, the teachers concerned, after deciding upon the organizational center (problem, topic, theme, and so on) usually bring together the collections of materials they already have, such as outlines, vertical files, bibliographies, clippings, and the like. Usually the first three sections as outlined above are matters of agreement by the total group and are recorded by some member. It is frequently expeditious for each of the remaining and more lengthy sections to be developed by an individual teacher. He would, of course, glean from the materials and ideas supplied him by other members of the unit planning group the points to be included. Furthermore, any work of an individual is best reviewed by the total group to make certain that all pertinent—but only pertinent—items are included.

There is the danger that the resource unit, if used in its entirety and without adaptation to a particular classroom, may have all the weaknesses of a single textbook. However, used properly, the resource unit may be of great advantage to individual teachers in developing their unit plans and as a reference for subject matter and teaching materials. Specifically, resource units are commonly used in the following ways:

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[19] Dallas Independent School District, *Language Arts for Secondary Schools: Resource Materials* (Dallas: Board of Education, the District, 1963). Parenthetical statements supplied.

1. By the elementary school teacher in planning a large unit of work based on a social studies, science, or other center of unity.
2. By the secondary school teacher in a completely departmentalized program in planning a unit of work which extends over a large number of class periods and is built around one major phase of the subject taught.
3. By the secondary school teacher in a block-of-time program in organizing a unit of work around a problem in social studies, for example, and including experiences in language arts and perhaps other subjects.
4. By a secondary school departmental group in planning phases of a large area or topic to be included in different courses within the department.
5. By teachers from two or more subject areas in planning phases of a large topic for consideration in the different areas.
6. By elementary school teachers at different grade levels in planning phases of a large area or problem for consideration at different grade levels and in all-school programs and activities.

LONG-RANGE AND SHORT-TERM PLANS

From the standpoint of the period of time for which the teacher plans, we can most conveniently consider the planning process with reference to the long-range framework of instruction, discrete units or blocks of work, and daily planning. However, plans for the framework, units of work, and daily work are almost inextricably related since daily plans may make modification in the larger unit plan, and the selection of particular units of work may indicate the need for revision of the total framework of instruction.

Planning the Framework

Whether the teacher is planning as a team member or alone for his own standard-size class, and whether he is planning for large-group or small-group instruction, he plans best with reference to some design of the total instructional program for the group or groups involved. This framework may be an extended syllabus of a high school course or a simple listing of major concepts and skills to be taught in a primary grade. However simple or complex, the framework is properly formulated by reference to basic educational goals of the school, existing guides as to the curriculum framework planned at other levels, and the potentialities of the curriculum areas and the pupils concerned.

The framework should reflect basic educational goals. Perhaps the most common violation of this principle in planning the framework is the adoption by the teacher of the outline in the course of study or the textbook as the basic plan of the year. One can only infer from this practice that the teacher discerns no goals for the group he teaches that are unique, and, further, that the acquisition of subject matter learnings represents the totality of educational purposes. Even if the teacher assumes for his pupils the exact goals formulated by the system-wide planning group which developed the course of study, one would still expect the framework to reflect some deviations which indicate the teacher's selection of emphases in terms of pupils' interests and needs and perhaps the teacher's own special interests.

Planning of the framework should be a deliberate, reflective process in which the teacher sets up some general destinations and routes thereto for the group he teaches. With his mind on these chief destinations or goals, he selects from the possible routes those which seem particularly appropriate to the level and the group concerned. The major units or other organizing centers which he selects are chosen as convenient and interesting landmarks along the route. Thus the framework is based on selected purposes and involves tentative identification of major organizing centers.

It should be meaningful to learners. The teacher's long-range plan should be one in which he has confidence about its meaningfulness to learners. In the first place, the centers around which he expects to organize instruction should be so meaningful to the teacher himself that he can be enthusiastic about conveying meaning to his pupils. Jersild pointed out in his study of *When Teachers Face Themselves* that "much of what teachers have to learn, much of what they have to teach, and much of what the millions of pupils who attend our schools are compelled to study is not meaningful but meaningless, largely because we have assumed that knowledge has value apart from its meaning for the one who acquires it."[20] He also pointed out that "each subject that is taught in elementary or high school or college could, in one way or another, for certain learners, be deeply charged with meaning" and challenged teachers especially in the following paragraph:

> If we as educators are to face the problem of meaninglessness, we must make an effort to conduct education in depth—to move toward something that is personally significant beyond the façade of facts, subject matter, logic and reason behind which human motives and a person's real struggles and striving are often concealed. This does not mean the rejection of subject matter—far from it—but it does mean helping the learner to relate himself to what he is learning and to fit what he learns into the fabric of his life in a meaningful way.[21]

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[20] Arthur J. Jersild, *When Teachers Face Themselves* (New York: Bureau of Publications, Teachers College, Columbia University, 1955), p. 81.

[21] *Ibid.*, p. 80–81.

In the second place, the framework must also include plans for involving the learner in the attainment of meaning. Specifically, effective plans usually include a period of orientation in which pupils have an opportunity to become involved in some planning of their own and thus to share in the commitment to the framework. The provisions of such an opportunity must assume flexibility in the teacher's plan so that it may reflect ultimately modifications made by the learners themselves.

It should be appropriate to the maturity of learners. Some learnings may have meaning to pupils and still be inappropriate to their maturity. Thus it has been amply demonstrated in recent years that some blocks of subject matter can be pushed down in the vertical grade structure and still be learned by many, perhaps most, pupils. We question, however, whether primary-grade children should be taught some aspects of mathematics, for example, simply because they seem to be able to learn them. It may be much more appropriate to their maturities to be spending their time in learning more about their self-discipline than the discipline of mathematics. At the same time we fully recognize that much subject matter, especially in such fields as social studies and literature, commonly reserved for higher grades might be much more appropriate to the maturity of younger learners in these days when television is a commonplace in so many areas and such a great variety of reading materials is available.

Probably the most important aspect of appropriateness in planning the framework of instruction is the necessity of taking into account the range of differences in the class to be instructed. Few if any goals can be attained to the same extent and through the same means by all learners in the group. The organizing centers selected should have sufficient breadth to provide for a wide range of abilities, interests, and aspirations.

It should be satisfying to learners. The composite result of some experiences children have in school is a feeling of dissatisfaction or, indeed, dislike for the material or the subject studied. In a statement of the implications of the perceptual theory for education, Robert Bills pointed out that "the first attitudes we hold toward people, institutions, and school subjects may be the ones we will retain during the remainder of our lives," and noted the effects of consistency of perception in this statement:

> Consistency of perception is illustrated likewise by the persistence of learned attitudes toward particular subjects and schools in general. Most people who dislike reading in school avoid reading when they leave school. And people with similar attitudes avoid Shakespeare, history, and American literature. Similarly, the first attitudes we learn toward teachers or a particular teacher are the ones we most likely will retain. . . .[22]

Thus the framework of instruction for a particular group should be planned so as to provide a maximum amount of pupil satisfaction and indeed liking for the instructional program. Again we should note the importance of an adequate introduction to the program so as to build involvement and indeed enthusiasm on the part of learners.

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[22] Robert E. Bills, *About People and Teaching* (Lexington: College of Education, University of Kentucky, December, 1955), pp. 34–35.

It should have flexibility. We would tend to reject as undesirable any framework which includes hard-and-fast schedules of ground to be covered. Effective teaching extends the time when extension is necessary and reduces or eliminates periods of instruction which seem unnecessary. Although the teacher may wish to plan beginning and ending points with some highly approximate indications of other time provisions, he avoids setting out a schedule which has to be obeyed. Furthermore, to be truly flexible in setting his framework the teacher includes many alternatives so that adaptations and selections can be made in the light of experiences from one unit, for example, to another.

It should have continuity. A plan should have both flexibility and continuity since the major reason for flexibility is to facilitate easy transition from one organizing center to another. Although a logical sequence may exist in certain curriculum areas, such as mathematics, science, and languages, even in these fields deviations from the logical sequence may be necessary in order to achieve some of the significant values already suggested. In other curriculum fields there is less inherent logic within the subjects themselves, and teachers can develop the most satisfying sequences through planning with their pupils in the light of the teacher's own experience and knowledge in the field.

Continuity has another aspect, however, that must also be regarded. This is the matter of articulation of the program from year to year. The effective teacher is much interested in the relationship of the work done the previous year and anticipated for the following year as he plans his own year's work with a particular group. Cooperative planning among teachers of different grade levels in the elementary school and at least within the subject area in the secondary school can do much to provide for this continuity.

Planning Units or Blocks of Work

Whatever the subject or level, the teacher will usually have planned an instructional framework which includes various division points or major blocks or units of work. For each of these units there will in time be needed at least a tentative chart, outline, or prospectus of the work the teacher hopes to carry on with the learners concerned. As noted earlier, we call this prospectus a unit plan. It differs from a resource unit in at least the following respects:

1. The unit plan is prepared specifically for one group of learners, and includes only those alternative plans which seem appropriate and feasible for the group concerned.
2. The unit plan outlines a tentative sequential arrangement of content and

learning experiences as their classroom development is anticipated by the teacher.

3. The unit plan assumes that some pupil-teacher planning will be used in the final selection of learning experience.

Great variations are to be expected in the ways different teachers organize plans for large blocks or units of work. Differences in teachers' own ways of working, in the nature of various curriculum areas, and in the level of pupils' maturities make impossible any standardized format of unit plans for all levels and subjects and teachers. However, certain steps that teachers take in preparing their unit plans are fairly common:

1. The organizing center (interest, problem, topic, theme, and so on) is defined and some desired outcomes of the unit of work are identified.
2. The teacher thinks through some ways of introducing the idea of the unit and of involving pupils in planning for its development.
3. Some basic concepts, facts, and skills to be acquired are identified, and related learning experiences are anticipated.
4. Some basic materials and teaching aids relevant to the unit are collected or listed or ordered, as the case may be.
5. Methods of evaluation whereby pupils and teacher can determine learning progress are considered.
6. If written unit plans are prepared, the foregoing items are reflected in the write-up.

Daily Plans

In addition to plans for each major division of instruction, and the pupil-teacher planning throughout the unit or block of work, most teachers make specific plans for each session with a group of pupils. Although the value of written lesson plans is quite limited, particularly when these are prepared for some other person to read, some kind of planning for each session with a learning group is essential. This daily planning involves some or all of the following tasks:

1. Determining what should be accomplished and how in the day or the period.
2. Arranging such physical facilities in the classroom as necessary for the jobs to be done.
3. Securing such resources for pupil learning as are needed and available.
4. Reviewing pupils' records and work, perhaps in conference with individual pupils as needed, to determine special challenges or additional help needed by particular pupils.
5. Preparing such materials as work sheets, instructions, reading lists, and so on, as needed to advance the work of the day or the period.
6. Using pertinent sources to expand the teacher's own understanding of the subject matter involved.

THE ROLE OF PUPILS IN PLANNING

Many discussions of pupils' participation in the planning process have overlooked some of the major principles of learning identified earlier. We do not see the reason for pupil involvement in planning as the frequently given one of substituting "democratic" for "authoritarian" practices. Presumably teacher-made plans could be based on as much concern for individual pupils as are pupil-made plans. The case for extensive pupil involvement in planning, as we see it, rests on the facts of motivation and individual differences. We believe that pupils are much more likely to be committed to learning enterprises which they themselves have determined as being important. Furthermore, we believe that each learner learns best in relationship to his own motivations and his own selection of learning experiences. Thus we are attracted to Carl Rogers' conception of the teacher as a "facilitator" of learning:

> The teacher thus concentrates on creating a facilitative climate and on providing resources. He may also help to put students in contact with meaningful problems. But he does not set lesson tasks or assign readings. He does not lecture or expound (unless requested to). He does not evaluate and criticize unless the student wishes a judgment on a product. He does not give examinations. He does not set grades.
>
> Such a teacher is not simply giving lip service to a different approach to learning; he is giving his students the opportunity to learn to be responsively free.[23]

The ways in which such a philosophy can be applied may differ from the teacher's own philosophy, with pupil readiness for this type of planning, and with the level and subject field.[24] Wherever pupils are given a role in the planning process we would suggest that teachers consider such criteria for effective pupil-teacher planning as the following:

1. Pupil-teacher planning should identify appropriate purposes of learning experiences.
2. The teacher should guide cooperative planning activities so that fundamental curriculum goals are served.
3. Pupils' judgment as to learning experiences should be based on an adequate understanding of alternatives.
4. Pupil-teacher planning should be used only as teacher and pupils are willing to be guided by plans made in this way.
5. Plans should be modified as new needs arise.

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[23] Carl R. Rogers, "Learning to Be Free," *NEA Journal,* 52:29 (March, 1963).

[24] See Gertude Noar, *Teaching and Learning the Democratic Way* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963), Chap. 6, for examples and principles of pupil-teacher planning.

6. The setting for pupil-teacher planning should encourage meaningful discussion and effective decision making.

PLANNING FOR GROUPS AND INDIVIDUALS

We have already dealt at length in this book with various types of group organization (see Chapter 10) and with the individualization of instruction (see Chapter 11). In this section we merely wish to emphasize the obligation of the teacher to make rather specific plans for large-group instruction, for small groups, and for independent study as these patterns are used.

Large-group Instruction

Under the stimulus of educational television and staff-utilization plans, many large classes (up to several hundred students) have become almost commonplace, especially in secondary schools and colleges. Undoubtedly the stimulus of brilliant lecturers thus affects more students than could be reached in the class of conventional size. We believe, too, that some presentations can be made as effectively, and certainly more economically, to large groups. However, we respect the caution indicated by the title of an article appearing in the May, 1963, issue of *Phi Delta Kappan*, "The Lecture—Are We Reviving Discredited Teaching Methods?" The author of this article, after indicating the severe limitations of the lecture, pointed out that "it may be a valuable part of the learning process if it is used properly."[25]

Planning for the lecture type of presentation inevitably associated with very large groups involves two principal kinds of activities for the lecturer. In the first place, he needs to prepare his lecture so that it is informative, interesting, and provocative. If the lecture is to be presented over television, he must also accumulate the necessary "props" so as to take full advantage of the medium. In fact, one of the frequently cited advantages of educational television is the far more intensive preparation made for lectures.

In addition, the lecturer who would have effective learning result from his presentation must find ways and means of overcoming the usual lack of pupil-teacher interaction in the lecture situation. Perhaps the most effective device is the combination of small discussion groups and large lecture groups such as has long been used in many college instructional programs. Probably the best arrangement, physical facilities permitting, is some type of warm-up, small-group activity resulting in questions for the lecturer's initial presentation, followed by the lecture with again small-group discussion to raise additional questions for clarification by the lecturer. This procedure is, of course, more difficult in conjunction with educational television, although many modern systems do provide for the feedback of questions to the studio teacher.

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[25] Lloyd Pulliam, "The Lecture—Are We Reviving Discredited Teaching Methods?" *Phi Delta Kappan*, 44:384 (May, 1963).

Team-teaching arrangements that provide for careful planning on the part of those who do the large-group presentations can also identify through the small-group leaders the questions and interests of pupils that guide the lecturer and help in structuring small-group discussion. In his description of this kind of operation, Pulliam suggested that "the major role of the master teacher, instead of being largely focused on the presentation of lectures, would be that of the coordinator of a staff of associate teachers, the demonstration of effective teaching practice, and the suggestion of learning activities and resources."[26]

Small-group Instruction

The use of small groups within the classroom group for instructional purposes has long been common in the elementary school but has only recently been used extensively in secondary schools (except in vocational education). Small groups within the classroom are currently used for many different purposes: they may be organized to do tasks for the total group, as homogeneous groups for skills development, as committees to explore group interests and to share information, and to perform a research type of activity in advanced classes.

Modifications in instructional organization popularly identified as the "Trump Plan" (see Chapter 10) have brought about a new alignment of large and small groups for instructional purposes. As indicated in the preceding section, large-group instruction is most effective when it is combined with small groups for discussion purposes. Whatever the basis of small-group organization, it is certain that the teacher concerned profits from specific plans for the activities of these groups. Those who really wish to learn can be very frustrated by discussion groups with no agenda to discuss. Advance agenda prepared by the group or possibly by the teacher is of great aid in eliminating such frustrations. Furthermore, specific preparation by members of the group for the discussion usually strengthens the achievement of group purposes.

Independent Study and Homework

In addition to all the opportunities for individualizing instruction that we discussed in Chapter 11, we see two types of individualized planning to be emphasized. In the first place, the traditional concept of homework is firmly embedded in the minds of many parents, pupils, and teachers and must be dealt with in the teacher's own planning. We ourselves question the values of uniform homework assignments at any level, and especially in the elementary school. The fact is, however, that various educational pressures and demands of recent years have caused many teachers to require more homework and at lower grade levels than in the past.[27]

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[26] *Ibid.*, p. 385.

We see effective planning for homework as including provisions for drill on skills that are understood and that the pupil can already perform. Skills can be practiced outside the classroom once these conditions of understanding and initial performance are met. We also see a great expansion of independent study arrangements such as those described in Chapter 11. The teacher will increasingly need to plan for students' use of programmed instructional devices and materials both for drill purposes and for initial learning.

A second type of planning for homework and independent study is the provision of opportunities for the development of creativity. For this purpose the teacher's planning must involve deep understanding of his pupils and of opportunities for the release of their potential. E. Paul Torrance, a leading researcher in the field of creativity, suggests that "one of the most obvious ways of providing conditions for creative learning is to offer a curriculum with plenty of opportunities for creative behavior."[28] He suggested:

> This can be done in many ways. It can be done by making assignments which call for original work, independent learning, self-initiated projects, and experimentation. It can be done daily by the kinds of questions teachers ask in class and by the kinds of problems used for discussion. One study showed that over 90 per cent of the questions asked by teachers of junior high school social studies courses called only for recall. Few questions called for any kind of productive thinking. Some of the new curriculum materials now being developed in the form of workbooks and audio tapes and recordings will make it easier for teachers to provide opportunities for creative learning. Essentially, these materials provide progressive warm-up experiences, procedures which permit one thing to lead to another, and activities which make creative thinking both legitimate and rewarding.[29]

Torrance also cited the following principles or procedures as having been shown in experimental studies to have positive value in facilitating creative behavior:

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[27] See Project on the Instructional Program of the Public Schools, *op. cit.*, p. 7.

[28] E. Paul Torrance, *Creativity* (Washington, D.C.: Department of Classroom Teachers and American Educational Research Association of the National Education Association, April, 1963), p. 14. Also see Torrance's *Education and the Creative Potential* (Minneapolis: University of Minnesota Press, 1963).

[29] Torrance, *Creativity*, pp. 14–15.

1. Give purpose to creative writing.
2. Provide experiences which make children more sensitive to environmental stimuli.
3. Develop a constructive attitude toward the information taught.
4. Provide adequate warm-up for creative activities.
5. In warming up pupils for creative thinking, avoid giving examples or helpful illustrations which will freeze or unduly shape their thinking.
6. Avoid giving evaluative comments too frequently during practice problems or activities.
7. Provide unevaluated ("off-the-record") practice.
8. Avoid the use of critical peer evaluation during practice sessions, especially above the third grade.
9. Within heterogeneous classes, use homogeneous rather than heterogeneous groupings occasionally to reduce the social stress among members of small groups working on creative group activities.
10. To evoke originality in thinking, make it clear that such thinking is expected and will be rewarded.[30]

IMPROVEMENT OF THE TEACHER'S PLANNING

In closing this chapter on the teacher's own planning some suggestions seem needed as to how the individual teacher may improve his planning processes. We have four principal kinds of suggestions: those relating to an increase in cooperative planning activity, developing classroom research and experimentation, working for conditions which facilitate good planning, and using available professional services.

Increasing Cooperative Planning Activities

As the teacher participates more and more in cooperative planning with other teachers by the kinds of arrangements described earlier in this chapter, he is likely to see ways of utilizing the cooperative approach to his own work with pupils. Furthermore, if cooperative faculty work is not common, the development of cooperative patterns of pupil-teacher activity may help bring about an improvement in faculty working conditions. The following specific suggestions for the teacher's cooperative activities with pupils are offered:

Accept one's pupils. Probably the first step in seeking pupil cooperation is for the teacher to accept his pupils as willing and cooperative rather than regard them as resisting and antagonistic. However lacking they may be in cooperation, the lack is probably due to their previous experiences, and the situation does not change until they have a different kind of experience.

The removal of threat as rapidly as the situation permits seems a major step in securing active pupil involvement in planning. As Bills remarked, persistent fundamental learnings are rarely learned under conditions of threat:

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[30] *Ibid.*, pp. 17–20.

> Anyway, that which is learned under threat is rapidly forgotten when the threat is removed. Students provide us with examples of this each semester. Under threat of failure we will learn that for which we have no particular need. Overcoming the threat becomes need-satisfying because it enables us to maintain our self-organization, but when the threat has been removed—when we have our final report card or when we have our diplomas—we rapidly forget that which did not satisfy our need for enhancement of self-organization.[31]

Try varying the procedure. The teacher whose pupils are accustomed to a recitation or drill procedure may find a complete changeover too much. New procedures may need to be introduced gradually. An important step is taken when the learners are given a better chance to react to proposed plans, and perhaps to suggest better ones. They can be given a chance to plan a trip or a program or a debate. They may be encouraged to bring to class questions about current happenings in the school, community, and nation. Gradually a discussion procedure is substituted in part for the right-or-wrong, question-and-answer recitation. As these changes take place, homework becomes a matter of noting questions and reports to share with the class; the grade book disappears because there may be no absolute answers to the questions raised; and the nature of tests, grades, papers, notebooks, and reports changes accordingly.

Use different materials. The traditional marriage of uniform textbook and the assign-study-recite teaching procedure is of such long standing that one partner cannot be modernized without some effect on the other. Changing from recitation to cooperative learning involves changes in the use of the textbook and other materials. The use of varied instructional materials and aids is frequently a major step toward abandonment of reliance on a single source of curriculum content.

Although the teacher may feel more secure in continuing the use of a basic textbook, he encourages pupils to find and use other sources. The pupil who finds a conflict between the text and some other source is stimulated to reconcile them. Pupils are urged to supplement their text with library materials, and the learner who has difficulty with a basic text is guided to another source. Items for further investigation are noted, and reference books are used as sources of information in greater depth. Programmed instructional materials are introduced to aid individual learners. Audiovisual aids are used to present or illustrate new ideas. These and printed materials provide a basis for additional questions and investigations. As these steps are taken, teachers will become deeply involved in the use of new sources of information, and they will also become better educated themselves and much more flexible in their planning and instruction.

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[31] Bills, *op. cit.*, p. 44.

Doing Classroom Research and Experimentation

As we see it, every problem facing the curriculum planning group and the classroom teacher is an opportunity for research, and every proposed solution a possible hypothesis for investigation. The success of curriculum planning depends very largely on the extent to which these opportunities are utilized for classroom experimentation.

Under cooperative planning procedures, the burden of proposing and carrying on experimentation does not rest with the individual teacher alone. The real responsibility belongs to the curriculum planning group and its leader to identify teachers interested in carrying forward experimentation, and to give them help and recognition comparable to that supplied by the sponsoring organization or institution in national programs of cooperative research. We believe that many curriculum problems are being solved more effectively because of the widespread participation of teachers in curriculum research. The school faculty which is experimenting is a growing faculty and will offer a better program as it experiments and grows.

Teachers may help most to meet the need for curriculum research by carrying it on. They may also promote the development of research and the utilization of more comprehensive research findings by such activities as these:

1. By talking freely about their dissatisfactions with existing curriculum practice
2. By questioning practices and proposals for curriculum change that are not supported by evidence nor designed to secure evidence
3. By attacking their individual curriculum problems through a research or experimental approach
4. By designing research projects as a phase of planning in curriculum committees, building faculties, teaching teams, and other groups
5. By reporting findings of their research to their colleagues and inviting visitation in their experimental classes
6. By writing articles reporting their findings for publication in local, state, and national bulletins and journals
7. By helping other teachers less experienced in carrying on research projects
8. By seeking administrative support of their successes and failures in research and experimentation.

Seeking Conditions Essential to Effective Planning

Although administrators are usually blamed for the absence of the conditions needed for good planning, we believe that all school personnel must help to create and maintain desirable conditions. Without being unduly aggressive, teachers can do much to help their colleagues and their administrators provide conditions which facilitate good curriculum planning. Several such conditions are described in the following paragraphs.

Respect for experimentations. Teachers and other school personnel who recognize the dynamic nature of educational processes respect research and experimentation. They know that this is the most defensible method of curriculum improvement. Accordingly, they welcome ideas which challenge current practice and give support and encouragement to efforts in research and experimentation. Reports of research are sought and recognition is given to the colleagues who produce the reports. Instead of suspicion and fear of experimentation, respect and encouragement are offered. In such situations experimentation thrives.

Reliance on evidence. An individual teacher might respect the right of another to carry on research and still reach his own decisions on the basis of suppositions. Decisions are made almost continually in the learning situation: What do we do next? When do we turn to something else? When do we work as individuals? as small groups? as a total group? Who will do this and who will do that?

Obviously it is not possible to carry on a research study every time such a question arises. Almost as obviously, however, these questions need to be answered by such facts as are available. When teachers lack facts from their own previous experience or that of other teachers it is time to explore the possibility of a research study which would give the facts. Continual reference to the "why" of decisions develops a pattern of thinking which helps and even stimulates experimentation.

Throughout this book we have been dealing with problems of curriculum planning by the individual teacher and groups of teachers. Implicit in all this discussion is the problem-solving approach that relies on evidence as the criterion for planning and evaluation. Teachers who go about curriculum planning thoroughly and conscientiously can find no other basis for making judgments. The evidence to be relied upon must generally come through the process of research and experimentation.

Cooperative ways of working. Adequate curriculum plans are rarely developed as the result of a single person's thinking. For plans to become the basis for positive and successful action there is needed a spirit of friendly give-and-take in faculty, teacher-parent, and teacher-pupil discussions which will encourage mutual problem-defining activities. Such a spirit is present in groups accustomed to frequent discussion and planning sessions where ideas are evaluated for their own worth rather than for their source. Teachers who can freely express their self-criticisms, their problems, and their ideas in faculty planning groups are much more likely to carry on effective planning than teachers who feel it necessary to conceal their feelings. The creation and maintenance of groups in which there can be friendly identification of problems and exploration of problem solutions are a responsibility of each teacher.

Cooperative ways of working also involve specific help from many sources. Pupils may need to help by adjusting themselves to different procedures and sometimes by gathering and summarizing facts about an experiment. Parents may need to fill out questionnaires or keep records or give assistance that would not be called for otherwise. Teachers may be asked to help by reporting their experiences, by relieving a teacher doing a special task, or by gathering and tabulating data. Librarians, secretaries, custodians, principals, and others may be involved in all sorts of unusual assignments. But all this help comes readily when there is genuine respect for the planning process and when cooperation is seen as a two-way process.

Facilities. In addition to the necessity of adequate time for planning, on which we dwelt earlier, there is need for assistance in the form of time, space, materials, and clerical service. Teachers cannot carry on their planning activities when they are doubling as study hall monitors or as bus supervisors. Neither can they plan effectively in the classroom when pupils are present and in need of help and direction. An office, or at least a private cubbyhole that is all the teacher's own, greatly facilitates effective planning. Every school needs a teachers' study.

Inevitably good planning involves the development of materials—resource units, unit plans, worksheets for pupils, tests, questionnaires, and other paper work. An investment by the school in clerical help for these purposes is more economical and better for learners than the use of its teachers' time and energies in the routine typing, test scoring, recording, and other duties involved.

Using Professional Services Available

Teachers in general are being provided an increasing range of professional services to aid their curriculum planning and instructional activities. Note, for example, the types of aid available in many well-supported and organized school systems:

General consultants (also called supervisors, coordinators, directors, counselors, and the like) to assist in both general and specific problems of instruction

Special consultants (also having varied titles) to serve as resource persons on curriculum planning, instructional materials, in-service education opportunities, and problems and facilities in general relating to particular subject areas

In-service education opportunities of many types: organized classes taught by instructors from nearby colleges and universities; study groups of teachers from various schools; conferences, workshops, and other group activities organized by the school system, professional associations, or universities; demonstrations; intervisitation arrangements; and others

Learning resources centers providing the various materials and services, described in the following chapter (14).

Unfortunately, all these services are not universally available nor are they of uniformly high quality. We firmly believe, however, that both their availability and helpfulness are improving and will continue to improve. Teachers can do much to help themselves by calling freely on the available services and by supporting their spread and improved quality.

FOR FURTHER STUDY

AMIDON, EDMUND J., AND NED A. FLANDERS. *The Role of the Teacher in the Classroom: A Manual for Understanding and Improving Teachers' Classroom Behavior*. Minneapolis: Paul S. Amidon and Associates, Inc., 1963.

Describes a system for the observation and analysis of teacher behavior in the classroom, with suggestions for changing behavior.

BELLACK, ARNO A., ED. *Theory and Research in Teaching*. New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Includes papers prepared by various persons engaged in research studies of the classroom activities and interaction of students and teachers.

BERMAN, LOUISE M., ED. *The Nature of Teaching*. Milwaukee: School of Education, University of Wisconsin–Milwaukee, 1963.

Papers on the nature of teaching and its implications for the education of teachers. See especially Herrick's paper on "Teaching as Curriculum Decision Making."

BURTON, WILLIAM H. *The Guidance of Learning Activities*. 3rd ed. New York: Appleton-Century-Crofts, Inc., 1962.

A major work on teaching, with particular relation to underlying principles of learning. Part III deals with unit planning and related tasks of teaching.

COMBS, ARTHUR W., CHM. *Perceiving, Behaving, Becoming*. 1962 Yearbook of the Association for Supervision and Curriculum Development, NEA. Washington, D.C.: The Association, 1962.

Four basic papers on the adequate personality, with several interpretations, provide challenging materials to teachers interested in planning and evaluating their practices on the basis of the ultimate criterion of personality development.

DEAN, STEWART E., AND CLINETTE F. WITHERSPOON. "Team Teaching in the Elementary School," *Education Briefs* No. 38. Washington, D.C.: U.S. Office of Education, January, 1962.

Explains current applications of team teaching, traces the history of this method, and evaluates the plan for implementation in the elementary schools.

GAGE, N. L., ED. *Handbook of Research on Teaching.* A Project of the American Educational Research Association. Chicago: Rand McNally & Company, 1963.

This comprehensive organization and critique of research on teaching is a rich source for teachers at all levels. Part IV contains chapters on research in each major curriculum area as well as one on research on teaching in the nursery school and one on teaching in college and university.

HANNA, LAVONE A., GLADYS L. POTTER, AND NEVA HAGAMAN. *Unit Teaching in the Elementary School.* New York: Holt, Rinehart and Winston, Inc., 1963.

This comprehensive treatment of unit selection, organization, and teaching in the elementary school, includes a chapter (16) on resource units with several illustrative ones.

HILGARD, ERNEST R., ED. *Theories of Learning and Instruction.* 63rd Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1964.

See especially, for its bearing on teacher planning, Chapter 8 on the teacher's role in the motivation of the learner.

National Education Association, Project on Instruction. *Planning and Organizing for Teaching.* Washington, D.C.: The Association, 1963.

This volume from the NEA Project on Instruction offers many suggestions to improve planning for instruction. See especially Chapter 4, "Toward Improved Classroom Organization."

NOAR, GERTRUDE. *Teaching and Learning the Democratic Way.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963.

Detailed suggestions for planning units with particular attention to learning experiences related to citizenship education.

SHAPLIN, JUDSON T., AND HENRY F. OLDS, JR., EDS. *Team Teaching.* New York: Harper & Row, Publishers, Inc., 1964.

Chapters 1, 5, and 6 may be especially useful in connection with planning for team teaching; these chapters deal, respectively, with a definition and description of team teaching, the relationship of team teaching and the curriculum, and the organization and administration of team teaching.

WILES, KIMBALL. *Teaching for Better Schools.* 2nd ed. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959.

Types of quality teaching described and illustrated are categorized under improving human relations, promoting group development, providing for individual differences, stimulating intellectual growth, developing self-direction, and exerting leadership in school and community.

CHAPTER 14

Selection and Use of Resources for Learning

The recently extensive application of technology to education has highlighted the continuing search for ways and means of aiding the teaching-learning process. With the advent of commercially produced teaching machines, there were even popular articles suggesting that machines might replace teachers, and others denying that human teachers could ever be replaced by mechanical ones. A bit of verse in a 1961 issue of *Saturday Review* caught up the controversy:

In the good old-fashioned school days,
Days of the golden rule,
Teacher said, "Good morning, Class,"
And so she started school.

Alas! how different things are now,
The school day can't begin
Till someone finds the socket
and plugs the teacher in.[1]

Certainly there were never before so many resources available to aid teachers, and also perhaps to confuse them. Curriculum planning at every level must now give much consideration to the selection and use of the right resource for each teaching-learning situation. This chapter presents a classification of possible resources, and some suggested principles to guide their selection and use in curriculum planning and instruction.

THE NATURE OF LEARNING RESOURCES

In the process of learning, the individual finds his own inner resources frequently useful but generally inadequate. During the learning experience, he usually turns to one or more sources of help. This help may be information, ideas, formulas, or generalizations, contained in books or given by another person, or it may be an experience which the learner can observe as it happens, or later through pictures, or it may be an environmental condition or facility to be studied firsthand. Whatever the source of help, it is a resource for the individual's learning. In other words, it is anything or anybody to which or to whom the individual turns for help in his goal-seeking activities.

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[1] Lilyn E. Carlton, "Teaching Machine Age," *Saturday Review*, November 18, 1961, p. 66. Reprinted by permission of the author and of *Saturday Review*.

The selection of learning resources would be relatively simple if individuals in the learning group could be assumed to have identical goals and identical experiences. But we know that even in a group of learners of about the same age and number of years in school the widest differences exist with respect to backgrounds and interests. Hence a single, identical resource for learning, such as a basic textbook, is not likely to be equally valuable for all learners in a particular group. There needs to be available to every classroom a variety of resources suitable to the range of interests, abilities, and previous experiences of the learners.

The range of possible tools for learning is almost as wide as that of known persons, objects, places, and processes. Almost any person, object, place, process, experiment, or demonstration may be of help to some individual in connection with some learning goal. Hence the problem of classification of resources is itself complex. For present purposes, the most usable classification is based on the form in which resources are available. Individual learners may find help through the use of human, environmental, printed, audiovisual, and certain other resources overlapping these types.

THE TEACHER'S DILEMMA

Learning resources are now so varied, plentiful, and powerful as to make learning more intense and more successful for most people than ever before. If all teachers could summon at will any aids needed by individual learners, the direction of learning might be completely rewarding. In practice, despite greatly increased appropriations for modern aids, including the use of federal NDEA funds for some types, many teachers are still limited through lack of facilities in the school, inaccessibility of resources outside the school, administrative regulations governing the use of even the available resources, and their own and their pupils' lack of facility in using a variety of learning aids. Hence, instead of using the most suitable resource for each pupil, teachers sometimes use a very limited number, usually printed ones and especially textbooks.

A teacher who knows that certain resources would make for better learning and yet is unable to use them for one reason or another needs help in curriculum planning. The curriculum leader can assist in several ways:

1. Such a teacher should learn as much as possible about the variety of resources which may be used. Perhaps there are potentialities in the people and in the environment which are being overlooked.
2. He should employ the resources which are available as effectively as possible. Possibly the problem is not only one of limited resources, but also one of ineffective use of those at hand.
3. He should show that use of different aids does improve learning. Bud-

getary limitations and administrative regulations may be modified when there is justification.

4. He should develop a plan which uses to their maximum advantage whatever aids are needed and available. Every plan should seek to achieve the comprehensiveness of some of the multimedia kits now available for teaching certain subjects.

Lewis pointed this out in his discussion of the multimedia approach: "The emphasis is not on enrichment and supplementary materials, but rather on *the consolidation of all materials and techniques into a design* that insures the best use of the teacher and the media in instruction and meets the individual pupil's way of learning."[2] We see this emphasis as a highly desirable one in the teacher's own planning, which should so far as possible incorporate a "multiresource" design in curriculum and instruction.

CHARACTERISTICS OF GOOD LEARNING RESOURCES

Although later sections suggest specific principles for effective selection and use of particular learning resources, certain general criteria apply to all. These are briefly identified in the following paragraphs as a suggested basis of study and evaluation of all resources.

Relevancy

The first characteristic to be considered in selecting any learning aid is its relevancy to the goal-seeking activity involved. Thus one turns to the policeman to learn about his duties, to the dictionary to find the meaning of a word, to the microscope to examine the shape of bacteria. This seemingly obvious criterion of selection is abused by such practices as these:

1. Use of textbooks or other materials as sole sources of information about problems which have materially changed since the materials were published
2. Use of films or telecasts as time fillers without relation to the subject at hand
3. Use of persons as speakers because they are entertaining without regard to how their speeches fit school purposes
4. Use of the same field trips from year to year without relation to particular units of work
5. Use of a teaching machine as a novelty when its program is irrelevant to current objectives

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[2] Philip Lewis, "Emerging Instructional Technology," in Robert S. Gilchrist (chm.), *Using Current Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, 1963), p. 99. Copyright © 1963 by the Association for Supervision and Curriculum Development.

Usability

The criterion of usability has at least two connotations of significance. First, the resources must be accessible at the time they are needed. The most relevant materials can be selected from book and film catalogues, but may not be usable because of lack of funds or time to secure them. The resource file may yield names of persons who can help on projects, but inquiry reveals that these persons are not available when needed. The problem of timing is a particularly complex one in relation to the selection of visual aids, which frequently must be ordered weeks in advance.

Second, a learning aid must be usable in terms of its appropriateness to particular learners. Relevant materials are available on almost any topic, but they may be appropriate only to mature readers. Similarly, competent persons may have a wealth of information bearing on boys' and girls' questions but be completely unable to present this information in terms the children will understand. The matter of appropriateness is ultimately answered in terms of individual learners, and so far as possible teachers must select a range of resources sufficient to provide for each individual. This criterion is violated most generally in regard to instructional materials selected by external groups.

Accuracy

The resources for learning must give as accurate information as possible. This criterion is of especial significance in relation to printed sources, particularly pamphlet materials. However, films and even persons may also give inaccurate information. It should be noted that materials prepared with particular biases, such as those used for advertising, may be helpful resources, but the teacher is obliged to point out the biases and inaccuracies and to use any other available materials to show differing viewpoints.

Economy

Other things being equal, the most economical resource should be used. But often other things are not equal and teachers have difficulty in estimating the costs in time and money of different tools. However, good judgment will rule out ordering machines or other aids in excess of the number that can be efficiently used; using films when equally effective and more economical slides, pictures, or pamphlets are available; taking a group of pupils to see a person who could easily and willingly come to the school; or sending an entire class to a set of reference books to read the same rather than different articles. Contrary to common assumption, the principle of economy is violated by using the same materials for all members of a class. When perhaps half of the group finds these materials too difficult or too boring, the same funds would be better spent for materials written at different levels of interest and difficulty.

SELECTION AND USE OF HUMAN RESOURCES

Significant curriculum plans give first importance to the role of human resources. Pupils turn to the teacher, to their parents, and to each other for interpretations of what they read and see. With the ever-greater specialization of vocations, teachers find increasing resources on many matters in the adult population. Enthusiasm for learning may be greatly increased when a visitor is invited to tell about firsthand experiences in his field of specialization.

The Teacher as a Resource Person

Traditionally, the teacher is an authority in the group—the assigner, the lesson-hearer, the tester, the final arbiter as to right and wrong responses in recitation and drill. The point of view presented in this book conceives of the teacher as a resource person or helper rather than as a taskmaster and judge.

Observation of teachers in effective learning situations reveals some rather specific activities in relation to individual pupils which particularly characterize this helping role. Some major types of these activities are identified in the following paragraphs. The broader concept of teaching and planning presented in Chapter 13 included descriptions of many other types of activities through which teachers may exert a helping role.

Helping individual pupils through finding appropriate activities. The boy or girl who is observed to be a nonparticipant in classroom activities is a challenge to the resourceful teacher. Such a teacher continues the search for something that will bring about this pupil's participation until a new book, a new leadership role, a different type of creative work, or some other device succeeds. The search may take a long time and involve a great deal of creative ability, but success in helping individual pupils is probably the most rewarding aspect of teaching. It is significant that many studies of pupil evaluation of their teachers indicate that pupils rate very high those teaching activities and traits which relate to the direct and personal help these pupils received.

Serving as a source of information. The creative teacher does much more than interpret textbook statements or answer factual questions to which learners could secure answers elsewhere. He makes available to each boy and girl all the information from his own experience that may aid in the development of interests and understandings. His special studies in college and university, his travel, his work, his participation in community affairs are all particularly useful experiences. A breadth of experiences and facility in sharing these with others are highly desirable qualifications of teachers.

Suggesting a variety of sources of information. The teacher not only needs information to be shared with pupils; he must be competent to direct learners to the wide variety of sources they need to consult in their self-motivated learning enterprises. The teacher occupies an important liaison position between pupils and librarians, school administrators, community agencies, and other resources. He can make learning to learn an exciting and successful venture.

Pupils as Resources for Each Other

In general, the character of the relationships among the people involved in the learning situation is believed to have more to do with the nature and quality of learning than any other single factor. This conclusion challenges the teacher to arrange the human elements of the situation in such a way as to bring about optimum learning. He needs a maximum of information about pupils and their feelings toward each other as well as a maximum of skill in using this information to organize effective working groups. When he knows them well, the teacher may help boys and girls serve as resources for each other.

Using pairs of learners. Many learning activities can be carried on by pairs of learners. Work by pairs is particularly effective for these purposes:

1. Practicing some skill in which one learner can check the other: spelling, oral arithmetic drill, association of words and definitions, paraphrasing reading material, question-and-answer exercises
2. Explaining processes to a fellow student who has not mastered them
3. Comparing information about a particular topic or question from two or more sources
4. Checking each other's written materials, such as tests, exercises, maps, graphs, drawings
5. Preparing tabulations of class attendance, participation, money collections, and similar matters

Since poor choice of pairs results in ineffective work, it is most important that the teacher be on the alert to discover factors in pairings which make for unhappy or inefficient work together. Programmed machines and materials may serve the first two types of purposes and thereby save pupils' time.

Using the unusual experiences of individual learners for helping others. With older children particularly, the wide range of experiential backgrounds provides a variety of resources within the learning group. Travel and work experiences are especially fruitful sources of information. The skillful teacher polls the class very frequently to find out which pupils have had experiences relating to the people and places and processes under discussion, and draws out ideas, impressions, and information which stimulate and answer the questions of other pupils.

Using special competencies of individuals for helping others. The need for special competencies in classrooms is as varied as the types of learning activities. In addition to the help that individuals can give because of their previous contacts with persons, places, and processes, many pupils have special skills which can be demonstrated to others. Thus special skills in music, art, writing, photography, woodwork, ceramics, athletics, dramatics, and all other "doing" areas of the school program are widely used to stimulate and guide development of skills on the part of other learners. Other competencies and facilities of individuals which may be used to advantage for the entire learning group are operation of special machines and tools; knowledge of a foreign language; identification of unusual birds, plants, geologic specimens, and so on; collections of a wide variety; training in various areas, such as television, that is far more specialized than that offered by the school.

Use of special roles in group learning situations. Special competencies are definitely to be considered in the selection of pupils for the various roles in group discussion and other activities: chairman, recorder, reporter, observer, and so forth. Although an important function of group learning situations is to develop these competencies in a maximum number of learners, the wise teacher helps the group to develop standards for special roles which ensure adequate practice for pupils who demonstrate reasonable skill.

Use of learners for liaison with outside resources. Arrangements for use of community resources may frequently be expedited through the help of pupils. Thus the teacher should be able to identify the pupil who can arrange through parents or others for a particular resource person or a particular field trip. Although the teacher, the principal, or a class committee may conclude the final arrangements, a first inquiry made by a pupil who is personally connected with the adult involved may be both a good learning experience for this pupil and a help to the group.

School Personnel as a Resource

Intelligent planning of learning experiences includes the selection and use of all school personnel who can help. The individual teacher can make use of his colleagues in at least two ways: first, in connection with their special responsibilities; second, by virtue of any unique resources their experiences provide.

As to special responsibilities, the possibilities of assistance depend on what personnel the school employs. The principal should be counted on to make community contacts, to secure facilities, and to help in arranging for the use of the school plant and its facilities. Persons responsible for custodial services can be most helpful in assisting with problems connected with various uses of the classroom and other building facilities. A school secretary may be invaluable in doing the telephoning, corresponding, and other tasks involved in the preparation of learning experiences outside the school.

Other special personnel may be fully used as they are available. Specialists in various curriculum areas, such as music, art, and physical education, bring information and skill to bear on units of work under way. In the departmentalized secondary school, teachers may call on colleagues in other departments to help at particular times. In more systematic team-teaching arrangements, each teacher's special resources determine his major responsibilities in the team. Guidance workers, health personnel, librarians, and other such specialists are of great usefulness.

The flexibility of the small school makes possible exchanges of classes as well as the sharing of resources. The large school, with its greater number of special personnel and resources, sometimes operates on such a mechanical basis as to make such sharing difficult. A major need for flexibility in scheduling is to use individual faculty members as speakers or as interviewees, and in other ways to enable them to share their personal travel, work, or other unique experiences. Such flexibility is frequently made possible by combining classes, by using substitute teachers, by letting groups work by themselves, and by exchanging teachers (to share experiences with the other's group). A way to use special competencies can usually be found. The teacher simply has to know what resources are available in the school personnel and to call on these in relation to definite needs of the learning group. A sort of catalogue—in other words, a resource file—of special interests and experiences of faculty members may be needed in large schools.

It is splendid recognition for older children, as well as excellent stimulation for younger ones, to have the former meet with their juniors to tell of interesting experiences. Consultation of teachers at different levels may identify individual pupils with unusual experiences, such as foreign travel, that may be so utilized.

Community People as a Resource

The possibilities of using community people as resource persons are limited only by the special competencies of the local citizens, and the ingenuity of school personnel in using them. There are many ways in which people from the community may be used as resources:

1. To meet with a class to share special knowledge about questions or problems under study
2. To work with a small group of learners needing help or instruction that the resource person is especially qualified to give
3. To demonstrate to a class some process or skill of special interest
4. To show movies, slides, or other visual aids about some place or process with which this person is intimately acquainted

5. To serve as leader or instructor of a specially organized seminar or other class
6. To meet with a class after a field trip, demonstration, or film to answer questions
7. To present issues or a point of view about issues which are of significance in the community and of interest to learners
8. To give expert guidance in the presentation of a play, the preparation of a mural, the composition of a school song, or related projects in which technical competence is essential
9. To help organize community surveys and other projects requiring special knowledge of one or more aspects of community life
10. To serve as a counselor throughout some extended study of specific community resources or problems

Two examples of wide-ranging plans of using community resource persons will illustrate the varied human resources available in a community. One plan is that of the "Resources Pool" of South Orangetown District 1, Rockland County (New York), which is described in detail in David Mallery's *A Community-School Venture*. In this district a large number of professional people worked Saturday mornings with about 15 percent of the school population, ages 10—18. The activities, planned by teachers of the district with the resource people but not necessarily correlating closely with the Monday—Friday school program, included such activities as those Mallery described in the opening paragraph of his report:

> As these words are written (December 1962, and, appropriately, on a Saturday), twelve high school students are working with a research chemist in a Tappan Zee High School classroom on a study of the dyes used in food coloring. Eleven seventh- and eighth-graders are having one of a series of sessions on computer mathematics with a scientist from a nearby geological observatory. Eight high schoolers are making a city planning survey of a village near the school with an architect, while another group is out on a social science field study in the same town with its team of leaders: a city planner, a lawyer who is an expert on relocation in urban renewal, a politician, and a history teacher. Some seventh- and eighth-graders are at work with an artist on a mural in the school's main hall, while in one of the rooms a novelist is working with some young creative writers of high school age. Nine sixth- and seventh-graders are writing and studying poetry across the hall, and two doors down some fifth- and sixth-grade artists are working on a Nonsense Book with a noted cartoonist. Next door high school seniors are discussing the U.S. foreign aid program with an anthropologist just back from West Africa, while ten-year-olds are out today scouting their home territory for Indian artifacts as junior historians and archeologists with a local historian.[3]

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[3] David Mallery, *A Community-School Venture: Top Professionals Work with School Students* (Boston: National Association of independent Schools, 1963), p. 7.

A "School Volunteer" program began operations in New York City in 1956 with a group of 20 volunteers in one elementary school. The ensuing development of the program through June, 1959, was fully reported by its director, T. Margaret Jamer, in a 1961 publication, *School Volunteers.* From February through June, 1956, a total of 1907 hours of service was rendered by 41 volunteers in the one school having the program; from September, 1958, through June, 1959, a total of 13,886 hours by 186 volunteers in 8 schools.[4] Jamer's classification of services performed by the volunteers includes the following: art classes, audio-visual (mostly clerical), classroom assistance (arts and crafts, clerical, displays, physical, preparation of teaching materials, reading, recreation, scholarship), clerical for school administration, clothing depot, collection of money, dancing, dramatics, foreign languages, health, holiday activities, hostesses, housekeeping, library, music activities, picture files, processing of school supplies, reading, registration, science club, school fund raising, sewing, supervision of children, travel (reports), trips. Thus, the volunteers really gave assistance with almost every aspect of teaching, especially in relieving the regular teacher of many "time-consuming, nonprofessional tasks" and in working with individual children and small groups.

Similar uses, on a somewhat less comprehensive basis, are made of community resource persons in many school districts. The teaching power of a school faculty can undoubtedly be enhanced by wise selection and use of human resources in the community both to supplement and to free teachers' professional competencies. Curriculum planning groups may well formulate policies and procedures for identifying, recruiting, and using wisely any specialists and aides who may be available.

SELECTION AND USE OF ENVIRONMENTAL RESOURCES

Environmental resources—that is, places—are classified here in terms of their location as resources in the school environment and in and outside the community.

Resources in the School Environment

Unfortunately, some schools still have only the most meager facilities in building and grounds. At the other extreme are many modern schools that have a variety of special and general-purpose rooms fitted to serve multiple-learning needs, as well as extensive outside spaces in playgrounds, gardens, and farming areas.

General classrooms. Every school, whatever its level, has classrooms which can be used by learning groups for activities requiring no special or immovable equipment. Thus the great majority of rooms in elementary schools are grade classrooms, and many, if not most, rooms in high schools are adaptable for instruction in curriculum areas such as social studies, language arts, and mathematics, which do not involve immovable laboratory and mechanical equipment. Whether or not the few facilities—blackboard, bulletin board, blank walls—that the classroom environment offers are used effectively depends very largely on the classroom teacher. The blackboard may be a very important aid if used for recording daily plans, summaries of discussions, and group agreements, and for illustrating problems and procedures. The bulletin board and the blank walls offer space that can be used for displays to stimulate learning activities and also to present information in clippings, charts, pictures, and posters.

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[4] T. Margaret Jamer, *School Volunteers* (New York: Public Education Association, 1961), p. 87.

A growing number of both elementary and secondary schools are being built to include a few large, multipurpose rooms. Such rooms are decided assets for curriculum plans which would bring together several classes of conventional size for special purposes, or which include some large-group instruction through televised or other presentations. These rooms can also be effectively used for breaking large groups into small ones for discussions, skills instruction by levels, committee work, and other small-group purposes.

Special-purpose rooms. The traditional elementary school had no rooms other than general classrooms, toilets, an office, and perhaps an auditorium. In addition to the general classrooms and all-school facilities, the modern elementary school has rooms fitted for such purposes as instruction in art, music, gymnasium, and shop; a library; movie projection (although general classrooms may be equipped for the use of visual aids, too); instruction of physically handicapped children; medical, dental, and psychological examination and treatment; a kitchen and dining room for small groups; and special collections. The teacher in such a school must know how to use these special facilities with individuals and with groups.

High schools typically have a larger proportion of rooms fitted for special purposes: science laboratories, greenhouses, homemaking rooms, industrial arts shops, and so forth. Unfortunately, these rooms are frequently so tightly scheduled as to be unavailable for learning groups from other classes wishing to use special equipment, such as microscopes or saws, for some unusual purpose. However, resourceful teachers can arrange with considerate colleagues for special help to individuals and small groups during the work periods of classes regularly scheduled in these facilities.

All-school facilities. Commonly used without respect to class organization and curriculum areas are the assembly rooms or the auditorium, the cafeteria or the lunchroom, and the corridors. The assembly room may be used by small groups for speech practice, for preparing of skits, and for other learning experiences in which a stage and props are desired. The cafeteria offers at least two types of special resources: its physical arrangement provides for round-table work by small groups that may be impossible in general classrooms; the preparation, selection, service, and consumption of food are processes studied in various learning experiences which may be investigated firsthand through the cafeteria. Even corridors may be resources for learning through the use of their space for exhibits and displays, and also for conferences by small groups.

Such uses as these are possible only if the school's policy permits full-time utilization of the places concerned. In view of the limitations of classrooms, it seems completely wasteful to restrict the use of the auditorium to weekly assemblies, or of the lunchroom to the noon meal, or of the corridors to the passage of classes. Resourceful teachers and administrators plan full use of all facilities with due concern for the protection of property and maintenance of good working conditions.

School grounds. An ideal urban school plant should probably include not only adequate playground space but enough gardens and other land for children to learn firsthand about the cultivation of flowers and vegetables and the living habits of small animals. Such space is rare, and school authorities sometimes exclude children from those portions of the school grounds which are planted in lawns and flowers. But any school ground available may be used for at least one learning experience: its proper care and beautification. Wherever there is some cultivation of plant life, learning groups have this as an additional resource. The playground is properly considered as a resource not only for developing physical skills but as a strategic opportunity for learning experiences in personal relationships. Weather conditions permitting, the school grounds may also be used as meeting places for learning groups; discussions around trees and grass are likely to be more interesting than those held around desks and tables.

Resources in the Community

Although the range of resources varies in proportion to community size, all but very small rural communities have some community institutions, business houses, and other places of interest. The large community generally constitutes a rich reservoir of resources for learning groups at all levels. To illustrate the variety of resources available in the large metropolitan centers we may note some of the types listed in a pamphlet, "The Arts," given new teachers in the Atlanta (Georgia) schools:

Atlanta Public Library
Galleries (12)
Arts Festival of Atlanta, Inc.
Atlanta School of Art (Saturday classes)
Theater Atlanta, Inc.

Children's Theater of Atlanta
Municipal Theater, Inc.
The All Star Concert Series
The Atlanta Music Club Concert Series
Atlanta Symphony Orchestra
Atlanta Community Orchestra
Atlanta Choral Guild
The Atlanta Civic Ballet, Inc.
Atlanta Concert Dance Group
The Atlanta Contemporary Dance Group
The Southern Ballet of Atlanta
The Atlanta Jewish Community Center
Atlanta Writers' Club
Atlanta Society of the Archaeological Institute of America
Atlanta Historical Society

The pamphlet includes enough detail about each of these activities and organizations to help teachers decide what interests of their own (or of their pupils) might be served, and how necessary contacts can be made.

In addition to such publications for teachers' own personal and professional development, many school systems prepare guides to community resources available for school field trips. Perhaps even more helpful, many curriculum guides include specific suggestions and facts as to field trips which relate to particular curriculum units of work or to other content items.

Two major types of problems in planning for the selection and use of community resources merit particular consideration. First, there is the difficulty of identifying places to which learners may be taken or directed. This is especially hard for new teachers in larger communities. Here the guides just discussed can be very useful to them. In addition to or in lieu of a system-wide guide, many individual schools have their own inventories of possible field trips. For example, a card file including essential information may be maintained. The individual teacher may also very profitably keep for his future guidance some record of field trips actually taken.

A second group of problems has to do with administrative aspects of field trips. Although the curriculum planning group may be unable to solve these problems in advance for particular schools and teachers, the problems may at least be recognized: How large should the class group taking a field trip be? How can the group best be taught and organized in advance to make the trip profitable? How much time is necessary, and what has to be done about conflicts with other school activities? What mode of transportation is to be used, and what safeguards must be taken about accidents and liability? How are the costs of the field trip to be met?

Resources beyond the Local Community

The same principles apply to the use of learning resources at places outside as well as inside the community environment. Use of these outside places is of much importance in many small communities. Schools in rural communities have rich resources in land and its products but poor resources in institutional facilities. Urban schools, however, lack the resources of nature, and are forced to depend on various substitutes: school-owned or privately owned farms, school camps, and field trips to farms, camps, parks, and other natural resources. Schools in rural communities need to make extensive use of longer field trips to nearby urban centers for studies of industry and government.

The problem of costs becomes acute in planning for the use of resources involving extended transportation. Since schools do not ordinarily provide budgets for such purposes, learning groups must usually tax their members (or their parents) or raise funds. The former procedure incurs all the economic and social problems which free public education seeks to minimize among learners. A variety of fund-raising projects are used to avoid these problems, and some, such as farm projects, clean-up campaigns, and sales of school products, may provide useful learnings. Thus teachers may make use of the motivational aspects of a future learning project to stimulate more immediate worthwhile activities. However, in view of the many inappropriate fund-raising drives also employed, the basic criteria of relevancy, usability, and economy need to be applied to the fund-raising activities as well as to the field trips supported.

In this connection we should note the school-sponsored contests of various sorts which provide trips for winning contestants. These contests need to be judged, first of all, on their own merits as learning experiences. Unless they produce important new learnings or stimulate many boys and girls in desirable learning activities which would not otherwise be undertaken, their intrinsic value is to be questioned. And if the contest itself is considered as valuable, the trip must also be evaluated.

The learning values of trips taken by athletic teams, debating squads, musical organizations, and other groups are sometimes overlooked because of concentration on the objectives of interschool competition. Perhaps high schools are truly letting "the tail wag the dog" when various school groups make extended trips for interschool competition but spend all their time in travel and in the actual competition. If one day must be given for the latter purpose, perhaps a second day should be given for well-supervised and planned visits to points of interest. Some schools might find it profitable to experiment with applying part of the funds previously expended for interschool competition to a broadened program of field trips for all youth.

These problems of curriculum planning for the use of distant resources should not lessen the potential value of extended field trips. An ideal curriculum plan would probably provide for a traveling school, for the limitations of physical location are still highly restrictive factors in experience. If learners could travel at will, the learning advantages of firsthand experience could be utilized wherever needed, but since learners cannot travel at will, wise curriculum planning utilizes distant resources whenever relevant, usable, and economical. Experiences in visiting governmental centers, great natural resources, industrial plants, and similar objectives of most extended trips should be sought for a maximum number of learners.

PRINTED RESOURCES, INCLUDING PROGRAMMED INSTRUCTION

Printed resources are classified for present purposes as follows: textbooks; programmed materials and devices; newspapers, magazines, and other current materials; free or inexpensive materials; reference, paperback, and other library materials; printed resources in home and community. Principles and problems of curriculum planning in regard to each of these types of resources are discussed in the following paragraphs.

Textbooks

The most widely used of the printed resources is the school textbook. Principals included in the NEA Project on Instruction's survey in 1961 ranked highest the textbook as a useful resource in developing a teaching program. Both elementary and secondary school principals gave it first rank at the time of the survey and for the preceding five years. The elementary school principals predicted it would still be the most useful five years later, and the secondary school principals gave it second place for that time, with curriculum materials prepared by the local school getting first ranking.[5]

Unfortunately, the textbook may be the only printed resource used in too many learning situations. The weakness in such situations is not inherent in the textbook. The problem is that varied materials are needed to provide for the individual differences of learners and perhaps by enrichment and illustration to help all pupils understand better even the most authoritative and well-written textbook. Good teachers everywhere will probably agree with the following statement by the Joint Committee of the National Education Association and the American Textbook Publishers Institute:

> As the world changes, Americans will require expanded and improved educational programs concerned with the culture of all lands and peoples.

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[5] Project on the Instructional Program of the Public Schools, *The Principals Look at the Schools* (Washington, D.C.: National Education Association, 1962), p. 24.

> In this expanded and improved world of learning, the textbook will continue to play a great historic role.[6]

The major criticism to be made of the use of textbooks is that one such "assistant teacher" is not enough for the variety of needs, interests, and abilities of the typical learning group. The solution, however, is to increase the effectiveness of the use of this resource and, wherever possible, to add other resources—not to do away with a most important one.

Practices in the selection of textbooks vary widely in the United States. It is not within the scope of this book to present all the arguments which can be advanced for and against the usual systems of selection. Guidelines for improving the process are suggested in the Joint Committee's report just cited. In general, it seems that a competent teacher should have freedom to decide whether the needs of the learning situation require the use of a basal textbook (that is, the same book for each pupil); if so, what additional materials are required; or, if not so, what materials must be available—co-basal textbooks (that is, sets of different books) or non-textbook materials. With freedom to make this decision, teachers may find it advantageous to select particular books from some list already screened or adopted. In practice, textbooks are sometimes chosen by state or local authorities and distributed to classrooms without consulting teachers as to their preferences. In such situations there may still be freedom for teachers to select additional materials or even to arrange exchanges.

Authors, professional committees, and school systems have prepared extensive lists of criteria, scoring sheets, and other guides for selecting textbooks. Although these may be valuable in making selections, the teacher needs more than anything else to keep in mind the special needs, interests, and abilities of the particular group of learners involved and the general curriculum goals planned for it.

The major principle of planning for the use of textbooks is the same as that for any other resource: the resource should be used as a source of help (information, stimulation of ideas, directions, and the like) for learners' own goal-seeking activities. Certain applications of this principle in the teacher's own curriculum planning follow.

1. The teacher needs to be thoroughly familiar with the organization and contents of the textbook, and should plan adequate opportunity for pupils to learn how to make the most satisfactory and economical use of its various features.
2. Some plan for using the textbook in relation to the sequence of learning problems rather than to the internal organization of contents should be developed. For example, in using a chronologically organized his-

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[6] Joint Committee of the National Education Association and the American Textbook Publishers Institute, *Guidelines for Textbook Selection* (Washington, D.C.: National Education Association, 1963), p. 13.

tory text for units of work not following a chronological sequence, there may need to be developed both an analysis (by pages) of content keyed to the units and some skeleton of chronology (a time chart, for example) for cross reference.

3. In the event that more than one textbook in some curriculum area is used for a particular learning group, the teacher must know the particular features of each sufficiently well to ensure a distribution of books which is most appropriate to the learners concerned. Frequent exchanges of books and the use of more than one book by individual learners may need to be planned.
4. The modern textbook is replete with teaching and learning aids: study exercises, suggested learning experiences, tests, and so on. Correlated films and other audiovisual aids may also be available. The teacher should devise ways and means of making the most effective use of these aids and other resources in accordance with the goals of the learning situation.
5. The teacher has a particular function in guiding the use of textbooks in order to develop sound study practices. Simple, uniform page assignments violate principles of learning. When pupils are directed to a section of a textbook there needs to be careful attention to the proper use of the contents, including all graphic materials, of the section. For example, the relation of illustrations to textual material, the system of headings, paragraph structure, the significance of italic and boldface type, numbered lists, marginal glossaries, and other items may need careful explanation and discussion in terms of the information being sought.
6. Use of the textbook in relation to other resources must be planned for. How the textbook material relates to a teaching machine, a field trip, a film, or a class discussion needs explanation. Comparison of text contents with information in reference books and other sources should be planned to ensure the development of important learning skills.

Programmed Instructional Materials and Devices

In the early 1960's much attention was being given by educators and commercial producers to the use of materials and devices increasingly classified as programmed instruction. Wilbur Schramm's definition of the term is very useful:

> By programed instruction I mean the kind of learning experience in which a "program" takes the place of a tutor for the student, and leads him through a set of specified behaviors designed and sequenced to make it more probable that he will behave in a given desired way in the future—in other words, that he will learn what the program is designed to teach him. Sometimes the program is housed in a "teaching machine"

published at both child and adult levels, should be recognized in curriculum planning. In the first place, a considerable share of the adult reader's time is spent in reading newspapers and magazines, and learners need to acquire facility and discrimination in selecting and using these materials. In the second place, current materials are valuable means of stimulating goal-seeking activities as well as the major sources of information on current topics.

The foregoing purposes for the use of current materials in the curriculum should be reflected in the plans made for their selection and usage. Thus as soon as boys and girls can read adult newspapers and magazines —and they read them very early at home—these children need to be given help in the proper use of the materials. Proper planning of the use of newspapers and magazines for motivation of learning involves the preparation of interesting and appropriate displays. The frequently drab and uninteresting bulletin board, with its assorted clippings, and the disorderly magazine rack can be avoided by a little care and thought. The use of magazines and newspapers as sources of information needs to be directed with careful attention to the criteria of usability and accuracy. That is, many adult newspapers and magazines are too mature for younger learners, and the bias of authors, reporters, and editors is always a possibility to be reckoned with.

A report of a study by a Joint Committee of the National Education Association and the Magazine Publishers Association summarized the uses of magazines at all levels as follows: ". . . source materials for individual assignments, materials for independent research by advanced readers, research files built up by the classes, bulletin-board displays, bases for general class motivation, and enrichment experiences for the regular school program."[12] These uses, and also the following observation in this report, seem applicable to all types of current materials:

> The tremendous reliance upon periodical materials in the study of current developments imposes still another responsibility—that of being accurate, fair, and objective. If an informed citizenry is important to our nation, magazines clearly share in the responsibility to create it. Who is to say that, in the long run, this may not be their most significant role?[13]

Free or Inexpensive Materials

The term "free or inexpensive materials" is widely used to cover a great variety of pamphlets, bulletins, monographs, and other publications of professional, governmental, commercial, and various special-interest agencies. These materials are sometimes produced in the interest of the group concerned and may be somewhat one-sided. At the same time, such materials are frequently rich resources both because of their attractive format and composition and because of their timeliness. Biased materials are also resources for developing discrimination in reading. For all these reasons, the proper selection and use of free or inexpensive materials is an essential aspect of curriculum planning.

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[12] Joint Committee of the National Education Association and the Magazine Publishers Association, *Magazines in the Classroom* (Washington, D.C.: National Education Association, 1960), p. 2.

[13] *Ibid.*, p. 30.

The problems involved in the use of these materials are so great that some school systems have adopted criteria for their selection. In some cases, materials must be screened by some committee before being used in the classroom. In the absence of such provisions, individual teachers should use some of the various services available as a guide to selecting free or inexpensive materials:

> *Booklist,* published monthly by the American Library Association, Chicago, includes lists of free or inexpensive materials and government publications.
>
> *Educators' Grade Guide to Free Teaching Aids,* published annually by Educators Progress Service, Randolph, Wisconsin, gives an annotated list of free charts, pamphlets, maps, exhibits, and books available for elementary schools. This organization also publishes other guides to free materials for guidance, science, and social studies, and also to several types of audiovisual aids.
>
> *Free and Inexpensive Learning Materials,* published about every two years by the Division of Surveys and Field Services, George Peabody College for Teachers, Nashville (Tennessee) lists selected pamphlets and other materials by topics.
>
> *NEA Journal,* published monthly, September—May, by the National Education Association, Washington, D.C., includes a section on free or inexpensive materials.
>
> *American Education* (formerly *School Life*), published nine times a year by the U.S. Office of Education, Washington, D.C., includes a section on government publications of special educational interest.
>
> *Standard Catalog for High School Libraries,* with semiannual supplements, published by H. W. Wilson Company, New York, lists pamphlets under the Dewey decimal classification.

Various journals of professional organizations in subject fields also list free or inexpensive materials in the respective fields. Probably the most important step in curriculum planning for the use of free or inexpensive materials is the actual examination of these materials by teachers.

Other Resources of the Library

The growing recognition of the central place of libraries and related resources in education was attested by their inclusion for special support in the Elementary and Secondary Education Act of 1965. A good library is essential to a good curriculum. In its many types of materials—and in the library in general—are to be found sources of potential value to every learner.

Encyclopedias and other reference tools offer perhaps the most easily available way of teaching boys and girls to find their own answers to an enormous number of questions. Frequent exercises in the use of these works in both elementary and secondary schools are planned by resourceful teachers to develop "look it up" skills. Indeed, these skills may be broadened to include use of the card catalogue, periodical indexes, and other guides to the library's storehouse. The library itself, whether completely centralized or to be found in part in classroom collections, is the information center of a school—an invaluable resource for truly independent and effective study.

The central library and/or the classroom collection increasingly holds a large number of paperback editions of many books, including original paperback titles. Sometimes purchased by students in lieu of or in addition to regular textbooks and sometimes provided by the school as supplementary material, the paperbacks are a growing resource, especially at the college level, but also in high school English and some other areas. The possibilities of paperbacks may help in curriculum planning for individualization of instruction on as economical a basis as possible.

Librarians provide a variety of helpful services to curriculum planning groups, individual teachers, and pupils. In addition to securing and making available all the printed materials we have described and, frequently, the audiovisual materials discussed later, librarians often compile bibliographies of available materials for resource unit planning. They may also maintain vertical or resource files organized around particular centers as desired by teachers. Their help is of great value, too, in identifying and procuring the professional publications teachers may need to consult in their planning activities.

Printed Resources in Home and Community

Curriculum planning cannot ignore the wealth of books and other printed materials usually available in home and community. The bookmobile is also such a resource for many schools. Although materials at home cannot be relied on for all learners, full advantage may be taken of the home libraries in which some learners have additional challenging and interesting reading. Also, pupils are frequently encouraged to bring books and magazines to school for sharing with others.

Community libraries are rich resources for teachers and pupils, particularly those for whom school libraries are inadequate or nonexistent. Individual learners can be encouraged to use the community library for special-interest purposes. Like the school library, it is a tremendous resource for independent study and for the development of continuing learning skills. The teacher's firsthand knowledge of the community library is essential.

SELECTION AND USE OF AUDIOVISUAL MATERIALS

Many professional books and other materials give specific information about the many types of audiovisual resources available for school use. Most agencies which distribute such resources—distribution centers of school systems, museums, audiovisual libraries, film and other rental agencies—provide catalogues and other information on the selection and use of the materials concerned. Television and radio systems provide schedules and guides to educational programs. Here we shall merely call attention to the variety of audiovisual resources to be considered in curriculum planning and to certain applications of the basic criteria for selecting and using all resources.

Pictures, Slides, and Filmstrips

Collections of pictures, both in color and in black and white, may be prepared by pupils and teachers as useful resources for present and future learning. Pictures on a great variety of topics may be clipped from popular magazines and other sources. To be usable, these pictures should be mounted, classified, and filed according to subject headings similar to the titles of units of work. Both classroom and central school collections are useful.

The criterion of accuracy is especially important in the selection of pictures, because distorted, one-sided, or false concepts may result from a single picture that fails to tell the whole story or misrepresents what it does tell. This caution is particularly applicable to the attractive pictures appearing in the advertising sections of magazines. A series of such pictures plus contrasting pictures on the same topic will help to correct false impressions.

Slides and filmstrips, whether prepared, rented, or borrowed, have extensive utility in learning. Various types of projection equipment may be used for showing slides, filmstrips, and pictures on the projection screen. The overhead projector is a particularly useful resource for presentations of graphs and other such materials to large groups.

Exhibits, Maps, Globes, Charts

Collections, relics, specimens, models, and other items brought from home, bought from commercial agencies, or loaned by museums, serve valuable instructional purposes. Generally, these are used in exhibits and displays, which serve both to stimulate learning and to provide information. Problems of space, storage, and preservation of these materials are sometimes acute. Unless a central school museum is practicable, probably it is best to prepare exhibits or displays when needed and then to return the pieces to the original sources.

A great variety of maps, globes, and charts are available from commercial agencies. These must be selected with particular concern for their practicability in the classroom situation as well as for their appropriateness to learners' maturity. Fixed equipment has the disadvantage of taking up needed space when not in use. Central school facilities for the storage of maps, globes, and charts seem desirable, provided these can be readily and easily moved into classrooms when need arises. Wise curriculum planning will make available a number of the most relevant, usable, and accurate maps, globes, and charts, and will provide teachers with adequate information about them.

Motion Pictures

Possibly the most widely used—and also the most misused—audiovisual resource is the motion picture. Lack of careful planning and problems of distribution frequently result in the showing of films to learning groups without relation to the classroom experiences and the maturity levels of the pupils. In fact, every criterion for selecting and using resources is violated by practices which permit the uneconomical use of learners' time in seeing films irrelevant to their goals, inappropriate to their interests, or inaccurate in content. It clearly behooves teachers to plan carefully for the wise use of a most valuable resource which can so easily be completely misused.

The selection of films is helped by curriculum guides which suggest relevant film resources. In the absence of such guides, the teacher may be aided by annotated guides to films prepared by the distribution agencies, but there is no adequate substitute for a preview of the film by the teacher concerned. Properly used, the film is perhaps the resource which can give to the largest number of learners the most intelligible information on the greatest variety of problems in the shortest time.

Recordings and Transcriptions

In addition to the usual phonograph records widely used in music and rhythms, several other types of recorded resources are available. Transcriptions of radio programs make possible the repetition of the program at more convenient times and as frequently as desired. Recordings of dramatizations, stories, poetry, and historical events are commercially available. Various recording devices owned by schools make possible the recording of learners' own voices as well as of events in school and community. Tape recordings of classroom sessions, speeches, assembly programs, and the like, may serve many purposes. These resources offer excellent help for learning experiences in almost every curriculum area. University bureaus, schools, and school systems maintain libraries of records and recordings, frequently as a part of a complete resource center. Again, the curriculum guide should give maximum direction to the selection and use of recordings and transcriptions, along with other learning resources.

Radio

Although now overshadowed by television, radio is still a resource of unique significance both because of its inherent values and because of its possible uses both in and out of school. Curriculum planning for in-school use has the practical problem of utilizing broadcasts at scheduled times which may or may not coincide with convenient times in the school schedule. The primary problem in directing out-of-school use is the difficulty of controlling learners' home schedules. Perhaps the major end to be sought with regard to out-of-school radio is cooperative planning with parents as to appropriate programs for children and youth.

In-school programs may bear directly on current units of work, and the daily program, especially in nondepartmentalized work, can be adjusted accordingly. One effective way of using broadcasts is through small groups or individuals, who hear a program and report to the total learning group in much the same way that they would describe a library project or a field trip.

TELEVISION AND CURRICULUM PLANNING

By the early 1960's, after a decade or more of experience with educational television, many communities had made a rather substantial investment in it and were extensively using the medium for educational purposes. Although accurate data as to the actual number of schools and pupils participating in television instruction are difficult to determine, by 1964 some eighty educational television stations were in operation and at least twice that many closed-circuit installations were in schools and colleges.

Even in 1961 it was estimated that at least 3 million students in elementary and secondary schools were receiving part of their regular daily instruction by television, and as many additional students were receiving televised "enrichment" programs.[14] Undoubtedly the numbers of sets and schools involved have increased, although the true extent of participation cannot be estimated with any confidence. In one state alone, Florida, with six ETV stations then in operation, the State Educational Television Committee reported in 1964 that 668,000 students in elementary and secondary schools of more than half of the state's counties were getting part of their regular instruction by television. In the same year, it was estimated that about 6 million elementary school pupils throughout the nation were receiving some ETV instruction. The use of the medium seemed so well established by 1963, in fact, that the Ford Foundation, which had given $86.4 million since 1951 to bring this about, announced that "classroom television has become sufficiently established to make unnecessary further large-scale support from the Foundation."[15] Certainly the wise use of this widely available resource must be carefully considered in curriculum planning.

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[14] John J. Scanlon, "Classroom TV Enters a New Era," *Saturday Review*, May 20, 1961, pp. 50–51. For a 1964 estimate see National School Public Relations Association, *The Shape of Education for 1964* (Washington, D.C.: The Association, 1964), p. 53.

From the standpoint of curriculum planning, at least three major aspects of television are significant: (1) television as a resource; (2) direct instruction via television; and (3) television as an asset and a responsibility of education.

Television as a Resource

Many television programs over both commercial and educational channels can be resources in the same sense that films and other aids are. Unfortunately for school use, many good commercial programs are on evening or weekend schedules and all that teachers can do is to recommend that these programs be viewed. But many news telecasts and programs showing special events as they occur are utilized in classrooms equipped with television sets. Teaching about current events can be greatly aided by the use of such programs. The teacher's own planning should include review of the schedule of television programs of the day and week in order to suggest to pupils especially relevant programs to view at home.

Educational channels also offer excellent programs for both in-school and out-of-school viewing. In addition to programs intended for direct instructional purposes, these channels offer a variety of educational programs for both children and adults. The National Educational Television and Radio Center (NET), serving as headquarters and national spokesman for its affiliated educational television stations, provides various programs to its affiliates.

Greater use of television as a resource can occur as video tapes of significant events become more generally available to be shown over closed-circuit television facilities as arranged by teachers. Central libraries of video tapes may well become more common as learning resources readily accessible to classrooms. Then history can be called up for the television screen when the time is appropriate.

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[15] The Ford Foundation, *Annual Report, 1963* (New York: The Foundation, 1963), p. 12.

Direct Instruction via Television

Direct instruction via television, whether over commercial or educational channels, open or closed-circuit, or airborne presents all the problems of curriculum planning dealt with in this book, plus certain additional ones. The chief of these, of course, is created by the fact that the television teacher is not immediately accessible to the pupil. However much the pupil may be attracted to the teacher on the screen, person-to-person interaction is lacking. This situation is usually compensated for, if at all, by efforts toward joint planning by the studio and classroom teachers which facilitate the latter's work with individual pupils. Thus the studio and classroom teachers constitute a special type of teaching team. In those situations where this type of planning has not occurred, such as those where there are no classroom teachers present other than monitors or assistants who do not follow up the television presentation with discussion, an important element of teaching is simply missing. Because of this it is doubly important for the studio teacher to have as much opportunity as possible to visit his viewers, to get speedy feedback of questions, and in general to prepare his presentations with as much knowledge as possible of pupils' probable questions and reactions.

Curriculum planning for direct television instruction must generally be much more detailed and precise than that for classrooms in which the teacher will be physically present. The dependence on presentation alone, the timing problem, the necessity of having one's props immediately available within camera range make specific plans of great importance. Furthermore, when there is a team-teaching relationship with responsibilities divided between studio and classroom teachers, these responsibilities must be adequately planned for by the team. Specific written guides for the classroom teacher also help when the television teacher is serving a wide area and a large number of classrooms.

Educational television has to be of very high quality to overcome the handicap of the inaccessible teacher. Various studies have indicated that pupil achievement is not adversely affected by this handicap, although they do not show how much more successful learning might be in regard to broader outcomes if classroom teacher and television teacher could be effectively teamed. The inadequacies of the current studies were cited as follows in a 1963 review:

> Some 400 studies of educational television have been completed on a wide variety of subjects at all levels of instruction. These studies establish without a doubt that students can learn efficiently from educational television. But most studies have only looked into the question of how television instruction compares in effectiveness with regular instruction.

> We also need to know how effective television in combination with classroom and home instruction can be.[16]

We suggest as a major need in curriculum planning experiments and designs for the full utilization of the best in television teaching and the best in classroom teaching, along with the use of other resources in school and home, in order to develop better education. Direct instruction via television can supplement regular classroom teaching as well as replace it.

Television as an Asset and a Responsibility

There are other relationships of television to education to be only briefly noted here, in addition to television's uses for supplementary and direct instruction. In the first place, children now enter school with some backgrounds from television viewing which need to be assessed along with other aspects of their preschool experiences. Schramm's review of research relating to television in the life of the child pointed out that a typical child devotes one sixth of his waking hours to television outside school, and that "television is presenting the schools with a child who is ready for a faster start but tends to slow down in the stretch."[17] He further noted that this child comes to school "accustomed to a very high level of showmanship" and that "his capacity for being bored is phenomenal." Thus it seems essential that curriculum planning take into consideration the knowledges and attitudes of children which have been acquired through many hours before the television screen at home.

A second major relationship is the responsibility of education to help the future adult acquire worthwhile viewing habits. Just as the curriculum planner aspires to develop effective skills in reading newspapers, he must also help develop information-getting skills in relation to news programs. And as appreciations of music and drama are sought, the television set must be recognized as the medium through which most Americans seem likely to hear music and to see plays. Thus the use of television is an objective of curriculum planning as well as a medium of instruction.

OTHER TECHNOLOGICAL RESOURCES

The years since World War II have witnessed many applications of technology to education. Many more are undoubtedly ahead. Several developments which promise continued popularity are briefly described in this section.

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[16] John L. Hayman, Jr., and James T. Johnson, Jr., "Research on the Context of Instrucitonal Television," *School Life,* 45:8 (April, 1963). Also see Wilbur Schramm, "Learning from Instructional Television," *Review of Educational Research,* 32:156–167 (April, 1962).

[17] Wilbur Schramm, "Television in the Life of the Child—Implications for the School," in *New Teaching Aids for the American Classroom* (Washington, D.C.: Government Printing Office, 1962), p. 65.

Language Laboratories

The audiolingual approach to teaching foreign languages was greatly aided by the marked expansion of the language laboratory made possible by the National Defense Education Act of 1958. Before then, a national survey in 1957 found that 64 public and private schools and 240 public and private institutions of higher education used language laboratories; a United States Office of Education 1964 publication reported that there were over 6000 installations in secondary schools alone, representing an outlay of some $30 million.[18]

There has been considerable variation in what is considered a "language laboratory"; an earlier United States Office of Education bulletin stated that the term had been used "to mean an idea, a method, a technique, a special room, a machine, or various types of electronic systems" but that it was "generally accepted as denoting various combinations or systems of electromechanical equipment used principally to aid the teaching-learning of foreign languages."[19] The chief resource of the laboratory is its utility for study and practice of the spoken language either with or without teacher direction.

Curriculum planning has problems as well as assets to deal with in relation to the language laboratory. The laboratories have at times been installed more rapidly than teachers were trained to use them. Thus one appraisal noted in 1962:

> The dilemma today is that too many schools are installing laboratories for teachers who are not using the audio-lingual approach and who, therefore, see no need for them. Many of these teachers have no idea of what a language laboratory is supposed to do. Pressure is put on them to use it, so they conduct their classes there. But they continue to teach as they would without the equipment.[20]

A 1963 report of a study of the use of language laboratories in teaching 5000 students of French in twenty-one school systems of the Metropolitan School Study Council raised several questions about the effectiveness of the language laboratory.[21] However, a review of this and also of several other studies which had results favoring the laboratory led Hutchinson to conclude in 1964 that "the usefulness of the language laboratory has been validated over and over again, and is constantly being validated now" and that the important need was to increase cooperative planning for its wise use.[22] This need is common, of course, to the wise use of all learning resources and especially of newer technological ones which remain in the category of "gadgetry" rather than curriculum until their potentials are thoroughly understood and planned for.

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[18] Joseph C. Hutchinson, "The Language Laboratory: How Effective Is It?" *School Life*, 46:14 (January–February, 1964).

[19] Joseph C. Hutchinson, *The Language Laboratory*, U.S. Office of Education Bulletin 1961, No. 23 (Washington, D.C.: Government Printing Office, 1962), pp. 2–4.

[20] Edward D. Allen, "The Language Laboratory in Learning Foreign Languages," *Theory into Practice*, 1:21 (February, 1962).

[21] Raymond F. Keating, *A Study of the Effectiveness of Language Laboratories* (New York: Bureau of Publication, Teachers College, Columbia University, 1963).

Amplified Telephone Services

In the early 1960's use of amplified telephone services was publicized as a means of bringing resource persons into the classroom. This relatively simple arrangement provides for amplification in a classroom of the voice of the person at the other end of the line. Thus students can hear their teacher question a resource person over the telephone and they can hear his answers. This seems an excellent way to bring to the class specialists who have agreed to talk about matters of importance to its members. The same device can be used by curriculum planning committees who want to consult distant specialists about specific points in the curriculum planning process.

"Push-button Lecture Halls"

Another resource useful in large-group instruction is the lecture hall so well equipped that the lecturer can illustrate his spoken words with television, film, slides, or tape by the touch of a finger. Controls at the speaker's podium enable him to summon many resources by the push-button technique. Undoubtedly this type of equipment will become more widely used as large-group instruction plans and facilities expand.

What Next?

We would be loath indeed to predict what may or may not be developed in modern technology for use in education. Most of today's technological resources certainly could not have been predicted by teachers of a generation ago, and technology proceeds at an ever-increasing rate of new development—and obsolescence!

Lewis' 1963 review of "Emerging Instructional Technology" suggested an interesting possibility for the future:

> It is also time to take the next big step—to design a total communications facility that can underwrite the instructional program in a multitude of ways. As an example, the language laboratory becomes, instead, a learning laboratory and perhaps a programing center for the entire school. Perhaps even the individual booths will be distributed throughout the school as study carrels for many kinds of student use. From this com-

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[22] Hutchinson, "The Language Laboratory: How Effective Is It?" p. 41.

munications center it is possible for prerecorded material on tapes and records to be distributed electronically to individual students in the carrels, to seminar groups, to classrooms and to large groups through the employment of random access storage and retrieval devices that are now available. In some current systems the activation of a conventional telephone dial is sufficient to switch in the program selected from a remote location.[23]

HELPS IN SELECTING AND USING RESOURCES

The individual teacher may find it impossible to be thoroughly informed on all the resources dealt with in this chapter and hence may not be expected on his own initiative alone to make a wise selection and an adequate use of all resources. To help him such services as the following are needed and increasingly provided.

Curriculum Specialists

We believe that the most helpful aid that can be given teachers is the personal assistance of a competent curriculum specialist. This help may come from specialists in general curriculum design and planning as well as from those specializing in particular fields of the curriculum, and those who have special competence in the use of various types of teaching aids. We foresee a general expansion of curriculum staffs of school systems to include highly competent specialists representing the following specializations:

Curriculum design and planning
Content and materials in each major subject field
Instructional television
Audiovisual resources
Textbooks including programmed instructional materials
Library resources
Community resources

These specialists, we believe, should operate as resource people. Their usefulness is based on the depth of their knowledge of the area concerned; hence a substantial part of their work should be reviewing materials and carrying on studies in the area. They work as consultants to curriculum planning groups and individual teachers, making available their knowledge and materials to aid the curriculum planning process. Further, these specialists are constantly guiding in-service education programs for teachers in order to keep the latter as fully informed on current resources as possible. Thus the curriculum specialist functions so as to minimize the gap between what can be and is accomplished in curriculum planning and instruction. We deal more fully with the role of curriculum leadership in the next and final chapter.

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[23] Lewis, *op. cit.*, p. 106.

The Curriculum Resource Center

School systems increasingly group certain types of resources into one location or center. There the services of one or more specialists in curriculum or learning resources may be provided and such facilities as the following housed:

1. Resource units and other curriculum guides
2. Collection of sample textbooks and library materials
3. Vertical files of "fugitive" materials
4. Teaching machines and programmed instructional materials
5. Professional reading materials
6. Sample instructional supplies and equipment
7. Audiovisual aids collection and indexes
8. Informative materials about community resources
9. Demonstrations and experiments with new supplies and equipment
10. Library of tape recordings

Resource centers containing as many of these materials as feasible are also desirable in larger individual schools.

Curriculum Guides and Resource Units

As we noted in Chapter 1, one of the chief values of the written curriculum guide is its array of suggestions regarding learning resources. The resource unit, dealing as it does with a single large topic or problem, is primarily a guide to the learning experiences and resources related to the problem. Hence these printed helps, where available, can be relied on as aids in selecting and using learning resources in relation to curriculum areas and units of work.

Guides to Specific Resources

In the absence of either or both the resource center and the written curriculum guides, the teacher may receive help from various types of guides to specific resources. Thus audiovisual handbooks, guides to excursions, files of resource persons' names and addresses, and catalogues of museum and library collections may be very helpful. The difficulty in using such guides arises from the fact that a teacher has to consult so many different sources to learn about the possible resources available on a single topic. The resource unit, file, or card inventory offers the real advantage of a single collection of the various related resources. Probably the best plan is a combination of resource units on single topics and of guides to specific resources regarding topics for which resource units are not available.

Evaluation Guides

Useful curriculum guides commonly include some type of checklist for evaluating resources. Various types of evaluative criteria and checklists are available in the professional literature, and some distribution agencies

Resource (Name, title, or other identifying information)

Grade or area for which evaluated

Name of person evaluating

Title(s) of unit of work or learning experience for which evaluated

EVALUATION

Criteria	Rating				
	Excellent	Good	Average	Poor	Undesirable
I. Relevancy A. Relates to the unit B. Covers the unit broadly C. Is up-to-date D. E. etc.					
II. Usability A. Can be secured readily B. Appropriate for learners C. Can be used easily D. E. etc.					
III. Accuracy A. Information seems true B. Bias is absent C. Avoids ambiguity D. E. etc.					
IV. Economy A. Fits maximum number of learners B. Involves minimum waste of time in use C. Cost is consistent with potential value D. E. etc.					

Figure 17: Form of a Checklist for Evaluating Learning Resources to be Expanded and Adapted for Different Types of Resources

provide evaluation guides with each resource, such as a film. The curriculum planning group and even the learning group should probably develop some type of guide for evaluating various resources. A model of such a guide is illustrated in Figure 17. Use of evaluative materials and discussions in connection with specific resources, especially field trips, speakers, films, and other resources occupying considerable time for an entire learning group, helps pupils to organize their own learning and also provides guidance for future use of the resource by other groups.

FOR FURTHER STUDY

BROWN, JAMES W., RICHARD B. LEWIS, AND FRED F. HARCLEROAD. *A-V Instruction: Materials and Methods.* 2nd ed. New York: McGraw-Hill Book Company, Inc., 1964.

An informative text emphasizing the varied use of audiovisual materials in relation to and as additional aids to instruction. Attention is given to the practicality of these materials in particular subject fields and levels, with examples and suggestions for utilization.

THE CENTER FOR PROGRAMED INSTRUCTION, INC. *Programs, 63: A Guide to Programed Instructional Materials Available to Educators by September, 1963.* Washington, D.C.: Government Printing Office, 1963.

Inventory of all programmed materials available in the fall of 1963 as catalogued and chosen by the publishers themselves. Entries furnish data as to subject matter and suggested academic level, title, author, publisher, and text description with sample items.

EMI: The Educational Media Index. 14 vols. New York: McGraw-Hill Book Co., 1964.

Comprehensive directory of nonbook instructional materials, prepared by the Educational Media Council under a U. S. Office of Education grant. The 14 volumes describe more than 30,000 items; the first two volumes cover preschool through grade 6, and the remaining ones are organized by subjects.

HUTCHINSON, JOSEPH C. *The Language Laboratory.* U.S. Office of Education Bulletin 1961, No. 23. Washington, D.C.: Government Printing Office, 1962.

Guidelines for planning and using language laboratories in secondary schools.

JAMER, T. MARGARET. *School Volunteers.* New York: Public Education Association, 1961.

This report of a nonpaid volunteers' program in New York suggests uses of community resource persons ranging from group play with music to individual reading help.

JOINT COMMITTEE OF THE NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN TEXTBOOK PUBLISHERS INSTITUTE. *Guidelines for Textbook Selection.* Washington, D.C.: National Education Association, 1963.

Describes procedures for textbook selection and specific guidelines for developing evaluation and selection.

KEATING, RAYMOND F. *A Study of the Effectiveness of Language Laboratories.* New York: The Institute of Administrative Research, Teachers College, Columbia University, 1963.

This comparison of the achievement of French students of twenty-one school systems who used laboratories with those who did not resulted in findings in favor of the nonlaboratory group. See for a controversial, critical assessment of the use of language laboratories.

Lewis, Philip. "Emerging Instructional Technology," Chapter 10 in Robert S. Gilchrist (chm.), *Using Current Curriculum Developments.* Washington, D.C.: Association for Supervision and Curriculum Development, 1963.

Emphasizes the need for the consolidation of all materials and techniques into a design that ensures the best use of the teacher and the media in instruction.

Mallery, David. *A Community-School Venture: Top Professionals Work with School Students.* Boston: National Association of Independent Schools, 1963.

Description of a "Resources Pool" plan for using professional people to work Saturday mornings with school pupils in a New York suburban community.

New Teaching Aids for the American Classroom. Washington, D.C.: Government Printing Office, 1962.

Report of a symposium on research in instructional television and tutorial machines. See especially Part I, "The Classroom of Tomorrow."

Pressey, Sidney L. "A Puncture of the Huge 'Programing' Boom," *Teachers College Record,* 65:413–418 (February, 1964).

A searching and highly critical look at programmed instructional materials and their current use by one of the early developers of such materials.

Schramm, Wilbur. "Learning from Instructional Television," *Review of Educational Research,* 32:156–167 (April, 1962).

Review of large number of studies of instructional television, with suggestions as to questions yet unanswered by research.

———. *Programed Instruction Today and Tomorrow.* New York: The Fund for the Advancement of Education, November, 1962.

Useful review and assessment of the field, including a "note on the research."

Wittich, Walter A., and Charles F. Schuller. *Audiovisual Materials: Their Nature and Use.* 3d edition. New York: Harper & Row, Publishers, Inc., 1962.

A general textbook dealing with television instruction, the language laboratory, and automated learning materials and their relation to ongoing classroom instruction, as well as with other aids.

Woodring, Paul, and John Scanlon. *American Education Today.* New York: McGraw-Hill Book Company, Inc., 1963.

This selection of articles from the *Saturday Review* Education Supplements includes several dealing with innovations in school facilities and teaching aids.

CHAPTER 15

Leadership in Curriculum Planning

We have dealt with the role of leadership very frequently in this book because there is and must be leadership in curriculum planning, a decision-making process. Both to introduce this concluding chapter, and to summarize certain aspects of the theories of curriculum planning and improvement we have developed, some of the earlier references to the role of leadership are briefly reviewed in the following paragraphs.

In Chapter 1, "The Theory and Process of Curriculum Planning," we answered the question, "Who plans the curriculum?" by indicating a role for many participants: academic scholars, classroom teachers and other public school educators, laymen, and students. In treating the "forces which affect curriculum planning," leadership roles were also indicated for many persons—those associated with accrediting agencies, colleges and universities, special-interest groups, as well as other persons, such as authors and publishers, critics, testers and researchers, foundation representatives, and educators in general. We also noted the role of leadership at various levels, including national, state, and local. In concluding that chapter, we emphasized the belief that specific roles could not be categorically defined but had to be determined in curriculum planning situations with respect to potential contributions of many individuals to the four central aspects of the process of curriculum planning: policy making, content selection, technical development, and arrangement of curriculum opportunities. In this chapter, we shall give particular attention to the role of leadership with regard to each of these aspects of curriculum planning.

Parts 2 and 3 were concerned with major factors to be considered by curriculum planning groups rather than with the operation of curriculum planning itself. However, Chapter 7, "The Marks of a Good Curriculum," indicated the role of many individuals and organizations in influencing by their point of view the determination of criteria for evaluating the curriculum. This chapter also implied significant roles for curriculum leadership in setting and applying the criteria used in curriculum evaluation.

In Part 4 many roles for leadership were suggested or implied in organizing the curriculum framework or design, in utilizing current developments in the subject fields, in organizing schools for instruction, and in providing curriculum differentiation for individual learners. In Part 5 we have dealt more directly with the functions of curriculum leaders, as attention has been given to organization for curriculum improvement in the school and system, the teacher's own planning, and the arrangement of resources for learning. Thus in Chapter 12, "Cooperative Curriculum Planning in the School and the School System," we included "competent leadership" as one of the essential characteristics of cooperative curriculum planning. In that chapter we also presented a theory of comprehensive curriculum improvement through system-wide self-study, indicating the role of different leadership groups and leaders in the stages of this process: (1) identification of curriculum needs; (2) investigation of innovative practices; (3) controlled evaluation of promising innovations; and (4) the diffusion of innovations proven useful.

In summary, then, we have described a process of curriculum planning and improvement in which various groups and individuals have important responsibilities. We fully recognize that each person involved in this process is exerting leadership. However, we have also frequently referred to the leadership of an individual with an assigned responsibility for leadership in curriculum planning and improvement.

In this the final chapter, attention is focused on the individual who has the assigned responsibility for leadership in curriculum planning and improvement. It is not intended in any way to ignore, belittle, or deprecate the importance of group work in curriculum planning or the contributions of individuals who assume leadership roles from time to time. We are simply concerned in this chapter with the work of the individual designated officially as a curriculum leader, whether his title be that of assistant superintendent for instruction, director of curriculum, director of instruction, supervisor, curriculum coordinator, or any of the other titles frequently used to describe the status curriculum leader. We realize, too, that school principals should be the chief curriculum and instructional leaders of the schools. However, they do have other functions, and in this chapter we are dealing only with the function of leadership in curriculum and instruction. Thus so far as principals operate in this role, the material here should be applicable.

THE CURRICULUM LEADER'S WAYS OF WORKING

Although attention is focused in this chapter on the individual curriculum leader, his predominant way of work must be as a team member. We would wholly agree with Thelen that "the present tendency is to think of leadership as a team operation; and to think that the various functions of leadership are distributed among selected individuals within the total group":

> On the whole, in the thinking of students of leadership, the ideal of the one-man leader, the *paterfamilias,* is on the way out. There is some doubt that the monolithic leader, working out his lonely destiny entirely by himself, ever actually existed—or at least that he existed in the numbers

claimed by some of our contemporary "rugged individualists." Generals had their confidants, politicians their wives, presidents their "kitchen cabinets."[1]

As the curriculum leader works with the many groups that operate in the curriculum planning field, he may choose a particular, preferred position in all groups possible, or he may simply operate on an eclectic basis, determining his role in each group in the light of group expectations, his own competencies, and other factors. Our own experience as curriculum workers indicates that the individual leader can probably be more effective in his total job if he refuses to be stereotyped in any one role for all or most groups. Among the roles he may take in group work are the following:

Chairman: As chairman, the leader may be able to help the group function well, but he may not be as able to guide group thinking by the quality of his own ideas about issues before the group.

Cochairman: Some leaders prefer that nonstatus persons serve as chairmen, reserving for the leader more of an advisory role to the chairman.

Recorder: As recorder, the leader can help through preparing careful minutes for records, but may find this somewhat confining in terms of his own participation.

Observer: In groups using the traditional chairman-recorder-observer team, the status leader may choose to guide group process through a role in which he can make process suggestions to the chairman and group members, although he may again be restricted in idea presentation or by hesitancy to be at all critical of group procedure.

Executive secretary or officer: This role, properly enacted, makes the leader more responsible to group direction and at the same time facilitates his implementation of group decisions.

Ex-officio member: Although this label identifies the leader's status, it may also limit his performance as a group member.

Liaison member: As a liaison between different groups, schools, or divisions of the system-wide organization, the leader can expedite communication.

Administrative representative: This role, more frequently played than named, limits the leader's effectiveness in many groups because of the emphasis on his serving as an administrative spokesman.

Member: In many situations, the leader may prefer to shed, so far as group position is concerned, any status symbol.

Consultant: Our conception of the leader would make him a consultant in any group, although this way of work may be facilitated in some groups by use of the title.

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[1] Herbert A. Thelen, *Dynamics of Groups at Work* (Chicago: University of Chicago Press, 1954), p. 326.

Resource person: The same connotation as consultant, although group expectations of the role may be aided by the "resource" label.

Speaker: In many situations, the leader is called on for speeches, much as he may dislike this way of work in a group wherein interaction between speaker and members is slow.

Planning committee member: Curriculum leaders usually do and should work with any inner committee responsible for helping the larger group determine agenda and procedure.

TASKS OF THE CURRICULUM LEADER

Three task areas may be clearly identified for the curriculum leader: (1) leading the curriculum planning process; (2) coordinating efforts of all groups and individuals working on curriculum problems; and (3) acting as a change agent for curriculum improvement. The role of the curriculum leader in regard to each of these major tasks is briefly described in this section.

Leading the Curriculum Planning Process

The curriculum leader can, and indeed must, make highly significant contributions to each of the four aspects of the curriculum planning process. Moreover, as the recognized leader of this process, he is uniquely able to set improvement goals and to work with all individuals and groups concerned to review and modify these goals as appropriate and, especially important, to see to it that the goals are achieved. As the leader, he should be expected to develop, advocate, and implement, within the limits of orderly group processes, definite proposals for curriculum improvement.

Participating in Policy Making. Policy making regarding curriculum matters has become far more complex than in the days when a few textbook authors, state and local supervisors, and official textbook committees could make what were regarded as the essential decisions in addition to legal statutes and regulations prescribing curriculum matters. The wide interest and involvement in curriculum policy making were described in the following statement by Gordon Mackenzie:

> The sources of power and influence for curriculum change have greatly increased. This results as education has come to be more widely viewed as having a crucial place in personal as well as in national and international welfare. This means, of course, that the circle of participants in curriculum change has immeasurably widened and that the . . . resources and skills brought to bear upon the process of change have become vastly more varied.
>
> Citizens in many walks of life, board of education members, government officials, academicians, members of the national legislative and

> judicial branches of government, foundations, American business and industry and others are in on the process of curriculum change. The task of providing instructional leadership in the presence of these new forces is both different and more complicated than it was a number of years ago. The way in which the instructional leader can utilize research, policy formation, and a variety of new approaches in dealing with this whole complex of participants is much in need of analysis.[2]

The tasks of the curriculum leader in working with all the individuals and forces mentioned by Mackenzie are multitudinous. He must help the central administration present to the board of education analyses of possible policies and their consequences on a variety of matters. He must sit in with the special-interest groups who would have their own special projects and programs reflected in official policy—sometimes policies which he himself cannot conscientiously support. He must help school faculties and staff groups make or recommend policies covering such diverse matters as admission and graduation, graded and nongraded organization, homogeneous grouping, required and elective subjects, athletics and safety education, team teaching and individualized instruction, television education and language laboratories, textbook selection and handling of objectionable materials brought to school by pupils. In all these groups he needs to work for policies which will expand curriculum opportunities for pupils and at the same time restrict the inclusion of curriculum content considered inappropriate or undesirable.

As he participates in policy recommendations, the curriculum leader has to help expose poor policies and at the same time work for the understanding and support of the very individuals whose proposals he may reject. Most of all, however, the leader must establish, and maintain as a central policy, a continuous effort toward curriculum improvement. Indeed, he must stand for only *good* policies, those that will make for an ever-better school program.

Guiding Content Selection. Since the focus of curriculum planning is on the selection and organization of curriculum content, the curriculum leader must be highly adept in guiding these processes. The competent leader is able to bring to planning groups a wide range of information and ideas about sources of subject matter and types of learning experiences. He is able to call on specialists in the various curriculum areas for expert counsel on the selection or development of materials in their respective fields. As he works from group to group, he detects omissions and overlappings and guides their correction. Frequently, the leader prapares materials and proposals for consideration by his associates.

With the ever-increasing tempo of discovery of new knowledge, neither the curriculum generalist nor the specialist is able to be fully informed about all the new knowledge that can be included in the curriculum. The curriculum leader, however, does need comprehensive knowledge about current research and experimental projects in the various areas so that he can bring reports of these to the appropriate planning groups. He should be the most widely read member of the school staff, an ever-available resource on "what's new."

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[2] Gordon N. Mackenzie, "Leaders to Match Today's Needs," *Educational Leadership,* 20:149 (December, 1962).

The publication of the Association for Supervision and Curriculum Development, *Using Current Curriculum Developments,* suggests the following ways in which the curriculum leader may work in connection with current projects in the curriculum areas:

1. Investigating reports of research, innovations, materials, and other curriculum development projects, and communicating information about the projects to those associates concerned
2. Organizing and leading curriculum planning and evaluation groups in assessing local practices, and planning needed program modifications with use of such current projects as reported in this publication
3. Developing proposals and experimental programs to meet local needs when no adequate programs are available
4. Assisting specialists in various curriculum areas in the introduction of new programs and the exchange of information about such programs
5. Arranging for tryout of new plans and materials with adequate provision for careful experimental designs
6. Organizing in-service education activities to assist the personnel involved in introducing new programs
7. Communicating with school boards and citizen groups information about current curriculum needs, innovations, and issues in the community
8. Preparing for appropriate duplication and distribution materials which will aid his associates in curriculum improvement efforts.[3]

As he guides the selection of content, the curriculum leader needs a frame of reference broader than that of any individual subject, although depth in at least one discipline stands him in good stead. But he needs a working set of criteria preferably related to an overriding philosophy of the function of subject matter. We dealt fully with such criteria in Chapters 7 and 9, but here would add an exceedingly attractive statement of the function of the subjects made by Norman Cousins in a *Saturday Review* editorial, and its implications for curriculum planning:

> The ultimate test of education is represented by the ability to think. We are not talking about casual or random thought. We are talking about sequential thought, that is, the process by which one frame of ideas is

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[3] Helen Heffernan and William M. Alexander, "Using Current Curriculum Developments," in Robert S. Gilchrist (chm.), *Using Current Curriculum Developments* (Washington, D.C.: Association for Supervision and Curriculum Development, 1963), p. 6. Copyright © 1963 by the Association for Supervision and Curriculum Development.

> attached to another in workable order so that they fit together without rattling or falling apart the moment they come into contact with a logical objection or query. . . .
>
> . . . the problems posed by an Age of Speed are not met by snap judgments, one-page memos on complex subjects, lightning-fast reading techniques, or rapid writing. We meet our problems only as we comprehend them and give them sustained and sequential thought. The quickest way to compound these problems is to put them in a pressure cooker.[4]

The curriculum leader can be the curriculum planning group member who not only keeps planning focused on development of the pupil's thinking power, but who cautions against putting either Johnny or his teacher in a pressure cooker of demanding, competing subjects.

Providing Technical Services. The curriculum leader functions as a technician in several significant ways as he works with groups of individuals in curriculum planning. First of all, he must be technically competent in group process. As already indicated, he needs to adapt himself to varied roles in curriculum planning groups. He also needs to be able to advise groups and group leaders as to efficient ways of bringing about full consideration and getting definite action regarding matters before the groups.

Second, the curriculum leader is generally assumed to be competent to the point of technical expertness in record keeping, editorial work, and various writing chores. The nature and importance of this competence is described as follows by Stratemeyer, Forkner, McKim, and Passow in their treatment of the role of leadership in improving communication among curriculum workers:

> One such function relates to writing assistance and the keeping of necessary records. Significant activities, projects, and researches require the maintenance of adequate records through professional direction and clerical assistance. One barrier to some kinds of research is the time needed for clerical processing and recording of data. Reports must be made and communication maintained. These are resources which curriculum leadership can help provide for individuals and groups.[5]

Another type of technical competence frequently expected of the curriculum leader is in the field of curriculum research. He needs not only specific and comprehensive knowledge about existing research but the ability to advise school faculties and curriculum planning groups about the conduct of research and experimental projects. As a minimum performance, the curriculum leader is able to locate abstracts and reviews of research studies from such sources as the *Review of Educational Re-*

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[4] Norman Cousins, "Not So Fast," *Saturday Review*, July 6, 1963, p. 14.

[5] Florence B. Stratemeyer, Hamden L. Forkner, Margaret G. McKim, and Harry Passow, *Developing a Curriculum for Modern Living* (2nd ed.; New York: Bureau of Publications, Teachers College, Columbia University, 1957), p. 694.

search, American Educational Research Journal, Journal of Educational Research, Encyclopedia of Educational Research, and the various research publications available from the National Education Association's Research Division and the United States Office of Education. In addition, he may provide information about resource persons from state and national educational agencies, colleges and universities, and other school systems, who can be called upon to serve as consultants in the research process.

Other areas in which the curriculum leader may be called upon to provide technical assistance include the various learning resources with which we dealt in Chapter 14. He is greatly aided in his work by competent specialists in the learning resource field but frequently has to double as such a specialist himself. The curriculum leader must also expect to be called upon to provide specific references to publications dealing with the curriculum and to be asked to assemble very rapidly pertinent sources for review by curriculum committees. With rapid duplication facilities available, he may be able to make available on very short notice pertinent excerpts from significant sources. The curriculum leader also frequently serves as editor of newsletters and other types of house organs which are almost indispensable in expediting communication in large school systems and even among faculties of large schools.

Helping Teachers Arrange Curriculum Opportunities. Many factors, such as the ratio of curriculum leaders to classroom teachers and the availability of other supervisory assistance, determine the extent to which curriculum leaders work individually with teachers. In our judgment, the curriculum leader cannot possibly operate at maximum effectiveness unless he has frequent opportunities to work in classroom settings with teachers. This is where his ideas can be best developed and tested. Even if there is only a rare opportunity to work with individual teachers, the curriculum leader can still do much in working with grade and departmental groups to help teachers in the arrangement of curriculum opportunities through planning of resource units and other such plans as we discussed in Chapter 13.

The curriculum leader's assistance to teachers is particularly critical if he would promote curriculum change. Brickell's study of the dynamics of instructional change in the elementary and secondary schools of New York State included in its conclusions this comment: "The most successful innovations are those which are accompanied by the most elaborate help to teachers as they begin to provide the new instruction,"[6] and added:

> It became vividly clear during the survey observations that the key to successful innovation is assistance to the teachers. The surest way to guarantee the successful introduction of a new program is to supply teach-

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[6] Henry M. Brickell, *Organizing New York State for Educational Change* (Albany: State Department of Education, 1961), p. 31.

> ers with all the help they need in moving into the new approach. Help can be given in the form of professional re-education (teaching the teacher necessary new content and new techniques), guided practice in the classroom (with expert advice at hand), plenty of instructional materials, active encouragement, and a chance to get ideas from other teachers who are learning the approach.[7]

We ourselves are satisfied that a curriculum services staff such as we described in Chapter 14, including highly competent specialists in various curriculum areas and learning resources, is an essential provision that school systems must make in order to maintain continuing curriculum improvement.

Coordinating Curriculum Planning Efforts

More than almost any other educator, the curriculum leader must be able to keep straight the relationship of the trees and the forest. As he works with individual teachers, school faculties, system-wide curriculum planning groups, and various groups of parents and laymen, he not only helps each individual and group to make a contribution to curriculum planning and improvement but sees to it that these contributions mesh well with each other. In an early article entitled "The Function of the Curriculum Director," as the position was just becoming recognized, Caswell emphasized this function of coordination in the following words:

> He must be in a position administratively to work with all groups affecting instruction. He must work cooperatively, depending upon the modification of viewpoints as a means of progress and thus must be in position to lead in the development of an in-service educational program for workers in the school system. He must be in position to coordinate supervision and to relate it to the evolving program. He must have opportunity to bring the findings of guidance workers to bear on the revision of the curriculum.[8]

A few years later, in perhaps the most significant analysis to that date of curriculum change, Miel also emphasized the importance of the coordinating functions of curriculum leaders:

> *The Curriculum Director* will naturally be a curriculum specialist, which means that he will have more than average knowledge of the social scene, of principles of child development and the learning theories. He, too, must be a coordinator and a strategist and a specialist in the uses of organization. He can serve a useful function by coordinating the services of the school psychologist, doctor, nurse, and specialists in the arts and crafts, music, library, and other fields. He should also assume special responsibility

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[7] *Ibid.*, pp. 31–32.

[8] Hollis L. Caswell, "The Function of the Curriculum Director," *Curriculum Journal*, 9:249 (October, 1938).

> for coordinating the efforts of those engaged in the preparation of curriculum materials. Possession of the ability to edit such materials would stand this officer in good stead.[9]

We would add to these excellent earlier statements the point that the coordinating function had become an especially complex one by the 1960's because of the great public and professional interest in curriculum matters and the many conflicting points of view about desirable directions of curriculum change, as well as because of the much increased need of teachers for help in keeping abreast of curriculum developments. The growing importance of the coordinating function of curriculum and instructional leadership led the American Association of School Administrators and the Association for Supervision and Curriculum Development to issue in 1963 a joint statement entitled *Organizing for Improved Instruction*. This statement asserted that "there is no formula for the right number and kinds of resources or resource people" but that needed resource functions "call for highly specialized competences and continuous study which simply cannot be found nor maintained in teachers, principals, and superintendents who have their own expertness to achieve and hold."[10] The statement recommended that all resource people not on the staff of an individual school should be organized in a division of curriculum and instruction, under the leadership of an assistant superintendent for curriculum and instruction. The duties of this leader were described as follows:

> The assistant superintendent coordinates the work of all specialists within the division, provides for clear and free communication both within and to and from the division, ensures that decisions, relationships, and activities affecting the curriculum or instruction are in accordance with established policy, and sees to it that recommendations for policy change are formulated and decided or forwarded to the appropriate person or body.[11]

Thus the curriculum director must be an able administrator in staff relations as well as a competent specialist in curriculum and instruction.

Serving as a Change Agent

All the tasks of the curriculum leader we have described can perhaps be summarized under this last heading. Whatever else he may do, the curriculum leader succeeds only as he is able to bring about effective curriculum change. In our judgment, he gives effective leadership to comprehensive efforts for curriculum change as he aids and abets the process of improvement which we described in Chapter 12 in relation to the selection, tryout, and diffusion of innovations. Thus we see the curriculum leader as serving an initiatory and resource function in the faculty self-studies which must precede the determination of changes needed in the school or system. Further, he is a first consultant to faculty groups as, having established priorities of needs, they look to other school systems for frontier practice, and to literature and research in order to select novel practices for use in their own situation. Third, in his research leadership capacity the curriculum leader aids the curriculum planning groups and school faculties in setting up controlled evaluations for their tryouts of selected innovations. Finally, in reference to this theory of curriculum change, the curriculum leader is probably the primary communicator of innovations found effective for diffusion to other schools in the system and outside it.

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[9] Alice Miel, *Changing the Curriculum: A Social Process* (New York: Appleton-Century-Crofts, Inc., 1946), p. 174.

[10] American Association of School Administrators and Association for Supervision and Curriculum Development, *Organizing for Improved Instruction* (Washington, D.C.: The Associations, 1963), p. 10.

[11] *Ibid.*, p. 15.

A similar philosophy of change has been described by Lippitt, Watson, and Westley in their publication, *The Dynamics of Planned Change*, as an adaptation of Kurt Lewin's analysis of three phases of the change process: "*Unfreezing* (if necessary) the present level, *moving* to the new level, and *freezing* group life on the new level."[12] The seven phases of the change process described by Lippitt, Watson, and Westley are as follows:

Phase 1. The development of a need for change.

Phase 2. The establishment of a change relationship [for example, "the problem of communicating the need for help in such a way that the potential change agent can understand and accept it and agree to the relevance of this type of help"].

Phase 3. The clarification or diagnosis of the client system's problem ["one important task which must be undertaken by the client system is to collaborate with the change agent in diagnosing the nature of the client system's difficulties"—the parallel in curriculum planning, as we see it, is the use of the curriculum director or consultant in the school system's comprehensive self-study program].

Phase 4. The examination of alternative routes and goals; establishing goals and intentions of action [paralleling the establishment of priorities in curriculum improvement, following a determination of needs through self-study].

Phase 5. The transformation of intentions into actual change effort ["the active work of changing is the keystone of the whole change process"—paralleling, in our theory, the search for and tryout of innovations].

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[12] Kurt Lewin, "Frontiers in Group Dynamics," *Human Relations*, 1:34 (1947).

Phase 6. The generalization and stabilization of change [that is, the diffusion of innovations found effective].
Phase 7. Achieving a terminal relationship [although this phase is not so definitely contemplated in our own theory of curriculum improvement, as one of the tasks of the curriculum leader we would emphasize building other leadership and terminating any dependence on himself in the continuing processes of curriculum improvement].[13]

The bracketed comments in the foregoing list are intended to show the parallels between the theories of Lewin and Lippitt and associates in regard to social change in general and our own theories of change in the curriculum.

Still another conception of the role of a change agent in curriculum development is implied in hypotheses proposed by Klohr and Frymier in the June, 1963, curriculum research issue of the *Review of Educational Research:*

> . . . Is there a need in the field of education for some type of dissemination service or agency that would function in a manner comparable to the county agent in agriculture to help teachers and administrators relate the best research results available to the local school situation? Could such an agency both strengthen and broaden the communication bridge between researchers and practitioners to the extent that curriculum would be affected in any appreciable way?[14]

Thus, whether the curriculum leader is regarded as change agent in social process, research implementation, the diffusion of innovations, or curriculum improvement in general, his potential contributions in the capacity of change agent are tremendous. Because of his status and, hopefully, his expertness, this leader is uniquely able to bring together people and ideas in such ways as to effect the change in people and their practices prerequisite to better school programs. But the requirements for success as a change agent are demanding; note some specifications posed by Bennis, Benne, and Chin in their introduction to Part II, "Conceptual Tools for the Change-Agent: Social Systems and Change Models," in *The Planning of Change:*

> Those who undertake the functions of a change-agent must not only diagnose the ongoing events in which they are involved but also must find ways to intervene in these events to maximize the valid human values implicit in the events. Ideally, the change-agent should combine in some

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[13] See Ronald Lippitt, Jeanne Watson, and Bruce Westley, *The Dynamics of Planned Change* (New York: Harcourt, Brace & World, Inc., 1958), pp. 131–143.

[14] Paul R. Klohr and Jack R. Frymier, "Curriculum Development: Dynamics of Change," *Review of Educational Research*, 33:317 (June, 1963).

> measure the wisdom and sense of perspective of the historian and the penetrating acumen of the scientific observer, while putting into practice the skills and arts of appropriate and resolute action.[15]

The curriculum leader for the school system is the logical change agent to expedite the spread of innovative practices from a pilot situation to others. This process, called "linkage" in Miles' extensive compilation and analysis entitled *Innovation in Education,* is facilitated by several of the factors he cites which we see as under the control of the curriculum director:

1. Choice of innovators who have "a direct pre-existing relationship with persons responsible for making political or financial decisions relevant to the innovation" (that is, teachers who are already accepted by other teachers who will decide whether to adopt the practices tried out by the former)
2. "Reasonably stable tenure in the innovating group" (that is, the pilot faculty should be one that is relatively stable)
3. "Operating stability via constructive norms and clear goals" (that is, a curriculum planning organization with such norms and goals)
4. Communication channels between innovating groups and others (that is, a system of reports, demonstrations, etc., by the innovators to others, probably with feedback opportunities)[16]

Such factors add up, we think, to the need for great wisdom on the part of curriculum leaders in selecting pilot innovations and innovators and in arranging for their support and understanding by curriculum planning groups and the professional staff in general. Secret and/or unwanted innovations are less likely to get diffused than those which are sought out and followed by a wider group than those who first introduce them. The curriculum leader is in a position to effect these favorable relationships.

QUALIFICATIONS AND PREPARATION OF CURRICULUM LEADERS

Our views as to the essential qualifications of curriculum leaders have probably become clear to those who have read this book or even the foregoing sections of this chapter. This leader, as we see it, needs the kind of personality structure which enables him to empathize readily with the many individuals and groups with whom he must work, and still be able to discern the need for dynamic leadership as well as to give it. He needs to be a past master of group process and also of individual counseling. He must also be qualified by experience and training to discharge the various tasks we have just enumerated regarding the curriculum planning process, the coordination of many efforts, and his services as a change agent. All these things he must do with poise, tact, and *élan*; with insight into curriculum and instructional problems, depth in the disciplines, and wide knowledge of curriculum sources; and with an abiding interest and technical competence in curriculum research.

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[15] Warren G. Bennis, Kenneth D. Benne, and Robert Chin, *The Planning of Change: Readings in the Applied Behavioral Sciences* (New York: Holt, Rinehart and Winston, Inc., 1961), p. 187.

[16] "Innovation in Education: Some Generalizations" from *Innovation in Education* by Matthew B. Miles. New York: Bureau of Publications, Teachers College, Columbia University, 1964, pp. 653–655.

We would be the first to grant that such an individual is hard to find. His function is so important, however, that school systems and teacher education institutions need to cooperate in finding young men and women with the personality and intellectual potential, and the emotional commitment to the job which will justify an investment in their preparation both by the preparing institution and the school system. The need is supported by such criticisms as Taba's of the present state of curriculum leadership:

> As one considers the state of curriculum leadership in the school systems, one would tend to agree that no current professional staff in a school district is completely competent in all roles that are needed in curriculum development: the technical skills in curriculum making, the mastery of intellectual discipline, the knowledge of social and educational values which underlie educational decisions, and the understanding of the processes of educational engineering and human relations. The skills in managing curriculum development are not highly developed. Most persons in charge of curricula are familiar with the various schematic approaches; they know what a good curriculum should be. But because curriculum theories are vague at this point, there is relatively little understanding of the elements which go into making that kind of curriculum, and particularly of the action steps that are necessary to combine these elements into a functioning curriculum. Therefore, many tactical errors are made, such as tackling curriculum development from the least movable points, undertaking tasks without analyzing the steps from which they can be accomplished, and generally in expecting too much in too little time.[17]

This situation, so accurately if pessimistically described by Taba, indicates as perhaps a priority item for the curriculum leader the intensive study of curriculum development itself. Such study is much more than a single course in the field, but should involve, we believe, many case studies in actual school situations and preferably an internship experience in a school system where the curriculum leader-to-be can observe firsthand the operation—or lack thereof—of sound principles and practices of curriculum development. We doubt very much if this kind of preparation can be an incidental one in the graduate program of a classroom teacher, school administrator, or other specialist in education. Note Mackenzie's conclusions regarding preparation in the field of instruction for administrative and staff personnel:

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[17] Hilda Taba, *Curriculum Development: Theory and Practice* (New York: Harcourt, Brace & World, Inc., 1962), p. 480.

> Examination of the state of our knowledge in the instructional area, of the range of functions performed by the administrative specialist in instruction, of the real difficulties in providing a program of preparation which influences subsequent professional behavior, of the complexity of current instructional problems in the schools, and of the consequences in practice of having administrators responsible for instruction who have only limited preparation for, or commitment to the area, leads to but one conclusion. There can be much in common, in the preparation of all administrators, but possibly at least 50 to 75 per cent of the preparation of administrators in the instructional area should be focused sharply on the special content and unique context associated with their sphere of activity.[18]

What should the program of specialized preparation of the curriculum leader include? In view of the continuing and speeding changes in the society, the schools, and the curriculum one must be a prophet indeed to dare to list learnings that the graduate student of the 1960's will need in his continuing career, perhaps even to the year 2000, as a curriculum leader. As we review our own careers beginning in the 1930's and the 1940's, we know that some portions of our preparatory programs have had little relation to the problems we have encountered in curriculum planning. At the same time we are certain that much focus on ways of looking at and solving curriculum problems was attained through both our graduate courses and our field experiences. Perhaps it is this focus which more than anything else should be contributed by the preparatory program. We have found especially invaluable such experiences as the following and commend these to readers who would establish or continue in careers as curriculum leaders:

1. Courses in the theory and practice of curriculum planning and improvement
2. Advanced graduate work and other specialization in at least one academic discipline to develop competence in its method of inquiry
3. Study of written cases of curriculum problems from actual school situations

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[18] Gordon N. MacKenzie, "Common and Specialized Learnings for Selected Administrative and Staff Personnel—Instruction." Tentative draft. Prepared for UCEA Career Development Seminar on Common and Specialized Learnings for Various Administrative and Supervisory Personnel, Michigan State University, November 11–14, 1962, p. 24. Mimeographed.

4. Participation as observers and members in various types of curriculum planning groups
5. Reviews in seminar type of class, of current curriculum research and curriculum research proposals
6. Examination of the research and literature for sources pertinent to specific curriculum problems
7. Development of courses of study, curriculum guides, and resource units, both as graduate assistants to ongoing curriculum programs and as participants in school planning groups
8. Service as an assistant or associate of an established curriculum director or professor of education who is often a curriculum consultant

RESOURCES FOR CURRICULUM LEADERS

Once on the job, the curriculum leader has many resources to help in his complex tasks: other curriculum leaders and professional associates in general, a large body of professional literature, professional associations, and various cooperative projects. Most leaders in the field find more help than hindrance, too, in the many forces effecting curriculum change which we have described. Although at times the pressures of conflicting interests all but overpower the curriculum leader, most of his tasks would suffer without the aid of many lay and professional groups, publishers and testing services, and other powerful forces.

The ever-growing body of professional literature for the curriculum leader's own library may be grouped as follows:

1. *General works* in the curriculum field—such publications as this book and others listed in our bibliographies.
2. *Reference tools: Encyclopedia of Educational Research, Dictionary of Education, Education Index,* and *Handbook of Research on Teaching* (American Educational Research Association) are especially useful.
3. *Professional periodicals: Educational Leadership, Review of Educational Research, Phi Delta Kappan, Educational Forum, Education U.S.A.* (weekly newsletter, National School Public Relations Association, NEA), and the periodicals published by various departments of the National Education Association in fields or at levels corresponding to the curriculum leader's major responsibilities.
4. *Current reports* from national projects relating to curriculum development such as those we have cited from the National Education Association's Project on Instruction, Cooperative Research, and various other projects sponsored by the United States Office of Education, and the various national curriculum studies (see Chapter 9).
5. *Official publications* from the United States Office of Education, the state departments of education, and local school systems, which present data and news of interest in curriculum planning.

The professional association first deserving the curriculum leader's membership and interest is the Association for Supervision and Curriculum Development (ASCD), a department of the National Education Association. This organization, with a membership representative of the entire profession but featuring services of special value to those directly involved in curriculum leadership, publishes *Educational Leadership* monthly October through May, a *News Exchange* several times annually, a yearbook, and various pamphlets—all focused on problems of instructional leadership. Its always well-attended annual meeting is generally regarded as one of the nation's greatest educational conventions, featuring group discussions, outstanding speakers, and panels of educational leaders, exhibits, and other activities. Its national committees carry on a variety of projects relating to problems of curriculum leadership; affiliated state units also provide opportunities for the exchange of ideas and development of curriculum projects.

Several other departments of the National Education Association also have publications and conferences of special interest to curriculum generalists: the American Association of School Administrators, American Educational Research Association, Department of Elementary School Principals, National Association of Secondary-School Principals, and Department of Audiovisual Instruction. In addition, the various departments devoted to individual subject fields provide publications and other services highly relevant to curriculum planning.

Among educational organizations not included in the National Education Association, three offer especially noteworthy resources for curriculum leaders: the National Society for the Study of Education, the Association for Childhood Education International, and the National Council of Teachers of English. The yearbooks of the first-mentioned organization (NSSE) have long reported research, practices, and ideas of significance in curriculum development as well as other fields of education.

Many curriculum leaders also find most helpful opportunities for cooperative planning that are sponsored by their state departments of education; colleges and universities; special research projects organized by state or regional or national organizations; and educational foundations, accrediting associations, and other agencies. All these opportunities —sometimes their mere number, too, becomes a real pressure on an overworked curriculum leader—facilitate exchange of experiences, ideas, and problems and possible solutions.

THE CHALLENGE OF CURRICULUM LEADERSHIP

Perhaps this is due to our own interest in the field, but we cannot imagine any position in American education offering more challenge to the committed educator in the decades ahead than that of a curriculum leader. This is a position which can uniquely make a difference in the quality of education provided children and youth in an actual community setting. The curriculum leader is in a position to help bridge the gap between social and educational change. As he helps lay groups, school boards, and educators he may be able to speed the change process, bringing about educational improvement to match that which automation is making in industry, for example. Working for the high motivation of teachers and other associates, he can indirectly effect great changes in the pupil motivations needed for educational improvement. Educators have every reason to recognize that their motivations, their sincerity, and their value commitments do affect these qualities in both their peers and their pupils.

From our observations as participants in curriculum planning in various school systems over a number of years, we offer the following suggestions as to the factors that really differentiate effective from ineffective curriculum planning:

1. Significant problems recognized by the members of the curriculum planning group
2. Interest and involvement on the part of those who are to work directly with pupils in the school situation
3. Patterns of administrative procedure and quality of administrative leadership which encourage individual initiative on the part of all school personnel
4. A clearly defined organization for curriculum planning with a definitely agreed-upon procedure for effecting change
5. Adequate facilities and time for curriculum study and experimentation with new practices
6. The availability of adequate technical services in the curriculum planning process
7. Full opportunity for interchange of experience, including interclassroom observation
8. Recognition of those personnel who sincerely and successfully work to improve their practices.

As we see it, the curriculum leader is best able to affect—even create in some cases—these factors. He can work with curriculum planning groups and faculties concerned to make certain that there are significant, recognized problems, interest and involvement, and interchange of experience. He can work with the school administration to develop congenial patterns of administrative procedure, adequate facilities and recognition of personnel and time, and he himself is generally directly responsible for the organization for curriculum planning and for the technical services. Thus it is the curriculum leader who can really make the difference between effective and ineffective curriculum planning!

Perhaps the greatest single need in American education is to achieve both the breadth and the depth in the curriculum essential to our American purposes of individual fulfillment in a democratic society. Breadth of curriculum opportunities must be provided if each individual learner is to find success for himself in the curriculum. Depth at the upper levels is equally significant if each individual is to develop his own potential as far as the schools can help him. The curriculum leader stands in a position of remarkable possibilities for affecting this breadth and depth as he works with all groups interested in curriculum improvement. He can be the insightful and informed leader who, seeing both the forest and the trees, guides and directs the processes of curriculum planning with such skill, knowledge, and commitment as to improve steadily the impact of education on the developing individual and his society. This is the opportunity and the challenge of curriculum leadership.

FOR FURTHER STUDY

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS AND THE ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT. *Organizing for Improved Instruction.* Washington, D.C.: The Associations, 1963.

Brief and forthright statement regarding the school system's organization by a committee of two national associations deeply interested in instructional leadership. Emphasizes the leadership role of the system's Division of Curriculum and Instruction.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, NEA. *Leadership for Improving Instruction,* Yearbook, 1960. Washington, D.C.: The Association, 1960.

This analysis of various facets of instructional leadership describes demands upon and tasks of educational leadership, illustrates task performance, and offers suggestions on the selection, preparation, and appraisal of instructional leaders.

———. *Role of Supervisor and Curriculum Director in a Climate of Change.* Yearbook, 1965. Washinton, D.C.: The Association, 1965.

Chapter Three analyzes the emerging role of the curriculum leader, and Chapter Five presents some description of the supervisor and curriculum director at work. Other chapters deal with current conditions, demands, and developments in the society and in education which relate to the preparation and functioning of curriculum leaders.

BENNIS, WARREN G., KENNETH D. BENNE, AND ROBERT CHIN. *The Planning of Change: Readings in the Applied Behavioral Sciences.* New York: Holt, Rinehart and Winston, Inc., 1961.

Many significant selections from the behavioral sciences are included and so related to help the student understand a theory of planned change.

COREY, STEPHEN M. *Helping Other People Change.* Columbus: Ohio State University Press, 1963.

Analysis of the change process in education and the consultant's role therein, as viewed from the author's wide experience in educational consultation. Curriculum leaders can find this brief and informally written analysis a useful basis for analysis of their own consultative activities.

Doll, Ronald C. *Curriculum Improvement: Decision-Making and Process.* Boston: Allyn and Bacon, Inc., 1964.

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